

## **Attachment 2-A**

### **Drawings**

**Solicitation No.: DTFAEN-11-R-00060**

**Construction of the**

**Airport Surveillance Radar-8 (ASR-8) Building Replacement Project  
Cyril E. King International Airport  
St. Thomas, USVI**



A map of St. Thomas, U.S. Virgin Islands, showing the proposed radar site. The map includes the following labels and features:

- EXISTING VORTAC**: Located in the northern part of the island.
- FORBURN ROAD**: A road running north-south, connecting the VORTAC to the southern part of the island.
- BREWERS BAY ROAD**: A road running east-west, connecting the southern part of the island to the airport.
- ATCT**: Located near the airport.
- AIRPORT**: Located on the southern tip of the island.
- CARIBBEAN SEA**: The body of water to the west of the island.
- RADAR SITE**: A small square symbol located on the western coast, north of the airport.
- ACCESS ROAD**: A road connecting the radar site to the main road network.
- ST. THOMAS**: The name of the island, written vertically on the right side.
- North Arrow**: Located in the top right corner, pointing towards the top of the page.

[illegible]

## LIST OF DRAWINGS

**Construction of the  
Airport Surveillance Radar-8 (ASR-8) Building Replacement Project**

**Cyril E. King International Airport  
St. Thomas, USVI**

<u>Number</u>	<u>Date</u>	<u>No. of Pages</u>	<u>Title</u>
STT-D-1000178-G001	04/17/2010	1	ASR Replace ASR Building Cover Sheet and Vicinity Map
STT-D-1000178-G002	04/17/2010	1	ASR Replace ASR Building Index Sheet
STT-D-1000178-G003	04/17/2010	1	ASR Replace ASR Building Legend and Abbreviations
STT-D-1000178-D001	04/17/2010	1	ASR Replace ASR Building Demolition Site Plan
STT-D-1000178-D002	04/17/2010	1	ASR Replace ASR Building Demolition Floor Plan
STT-D-1000178-D003	04/17/2010	1	ASR Replace ASR Building Demolition Single Line Diagram
STT-D-1000178-D004	04/17/2010	1	ASR Replace ASR Building ERMS Panels; Demolition Floor Plan
STT-D-1000178-C001	04/17/2010	1	ASR Replace ASR Building Interim Site Plan
STT-D-1000178-C002	04/17/2010	1	ASR Replace ASR Building Final New Site Plan
STT-D-1000178-C003 type	04/17/2010	1	ASR Replace ASR Building Site Details and Sections
STT-D-1000178-C004	04/17/2010	1	ASR Replace ASR Building Fence Installation Details

STT-D-1000178-C005	04/17/2010	1	ASR Replace ASR Building Fence Grounding Details
STT-D-1000178-A001	04/17/2010	1	ASR Replace ASR Building Plan and Wall Openings
STT-D-1000178-A002	04/17/2010	1	ASR Replace ASR Building Elevations
STT-D-1000178-A003	04/17/2010	1	ASR Replace ASR Building Sections and Details 1 of 2
STT-D-1000178-A004	04/17/2010	1	ASR Replace ASR Building Sections and Details 2 of 2
STT-D-1000178-A005	04/17/2010	1	ASR Replace ASR Building E/G Bldg Floor Plan and Elevations
STT-D-1000178-A006	04/17/2010	1	ASR Replace ASR Building E/G Bldg Elevations
STT-D-1000178-A007	04/17/2010	1	ASR Replace ASR Building E/G Bldg Sections and Details
STT-D-1000178-E001	04/17/2010	1	ASR Replace ASR Building Electrical Site Plan
STT-D-1000178-E002	04/17/2010	1	ASR Replace ASR Building Power Plan
STT-D-1000178-E003	04/17/2010	1	ASR Replace ASR Building Lighting Plan and Electrical Details
STT-D-1000178-E004	04/17/2010	1	ASR Replace ASR Building Single Line Diagram
STT-D-1000178-E005	04/17/2010	1	ASR Replace ASR Building Conduit and Cable Schedules
STT-D-1000178-E006	04/17/2010	1	ASR Replace ASR Building Panel Schedules
STT-D-1000178-E007	04/17/2010	1	ASR Replace ASR Building Grounding Plan
STT-D-1000178-E008	04/17/2010	1	ASR Replace ASR Building Grounding Details

STT-D-1000178-E009	04/17/2010	1	ASR Replace ASR Building Grounding Details
STT-D-1000178-E010	04/17/2010	1	ASR Replace ASR Building Earth Ground Resistance Testing Instructions and Procedures
STT-D-1000178-E011	04/17/2010	1	ASR Replace ASR Building E/G Bldg Electrical Plans
STT-D-1000178-E012	04/17/2010	1	ASR Replace ASR Building Lighting and Electrical Installations
STT-D-1000178-E013	04/17/2010	1	ASR Replace ASR Building Control Diagram
STT-D-1000178-E014	04/17/2010	1	ASR Replace ASR Building Stairway and Landing Power and Lighting Modification Notes and Details
STT-D-1000178-E015	04/17/2010	1	ASR Replace ASR Building ERMS Panels Floor Plan
STT-D-1000178-E016	04/17/2010	1	ASR Replace ASR Building ERMS Panels P1, P3, P4, and P5 Interconnection Diagram
STT-D-1000178-E017	04/17/2010	1	ASR Replace ASR Building P2A, Dec 550, PM340, and M340 Connections for ERMS
STT-D-1000178-M001	04/17/2010	1	ASR Replace ASR Building Building HVAC Plans and Sections
STT-D-1000178-M002	04/17/2010	1	ASR Replace ASR Building Mechanical Schedules
STT-D-1000178-M003	04/17/2010	1	ASR Replace ASR Building A/C Control Wiring Schematic
STT-D-1000178-M004	04/17/2010	1	ASR Replace ASR Building Damper and Louver Details W/ Pipe Extrusions Through Wall Details
STT-D-1000178-M006	04/17/2010	1	ASR Replace ASR Building Fuel Oil Piping Schematic
STT-D-1000178-M007	04/17/2010	1	ASR Replace ASR Building Plumbing Fuel Tank Details 1 of 2

STT-D-1000178-M008	04/17/2010	1	ASR Replace ASR Building Plumbing Fuel Tank Details 2 of 2
STT-D-1000178-M009	04/17/2010	1	ASR Replace ASR Building Fuel Piping Trench Details
STT-D-1000178-S001	04/17/2010	1	ASR Replace ASR Building Foundation Plans and Details
STT-D-1000178-S002	04/17/2010	1	ASR Replace ASR Building Miscellaneous Foundation Plans and Details
STT-D-1000178-S003	04/17/2010	1	ASR Replace ASR Building Concrete Roof Reinforcing Plan and Sections
STT-D-1000178-S004	04/17/2010	1	ASR Replace ASR Building E/G Building Foundation Plan and Details
STT-D-1000178-S005	04/17/2010	1	ASR Replace ASR Building E/G Building Structural Plan and Details

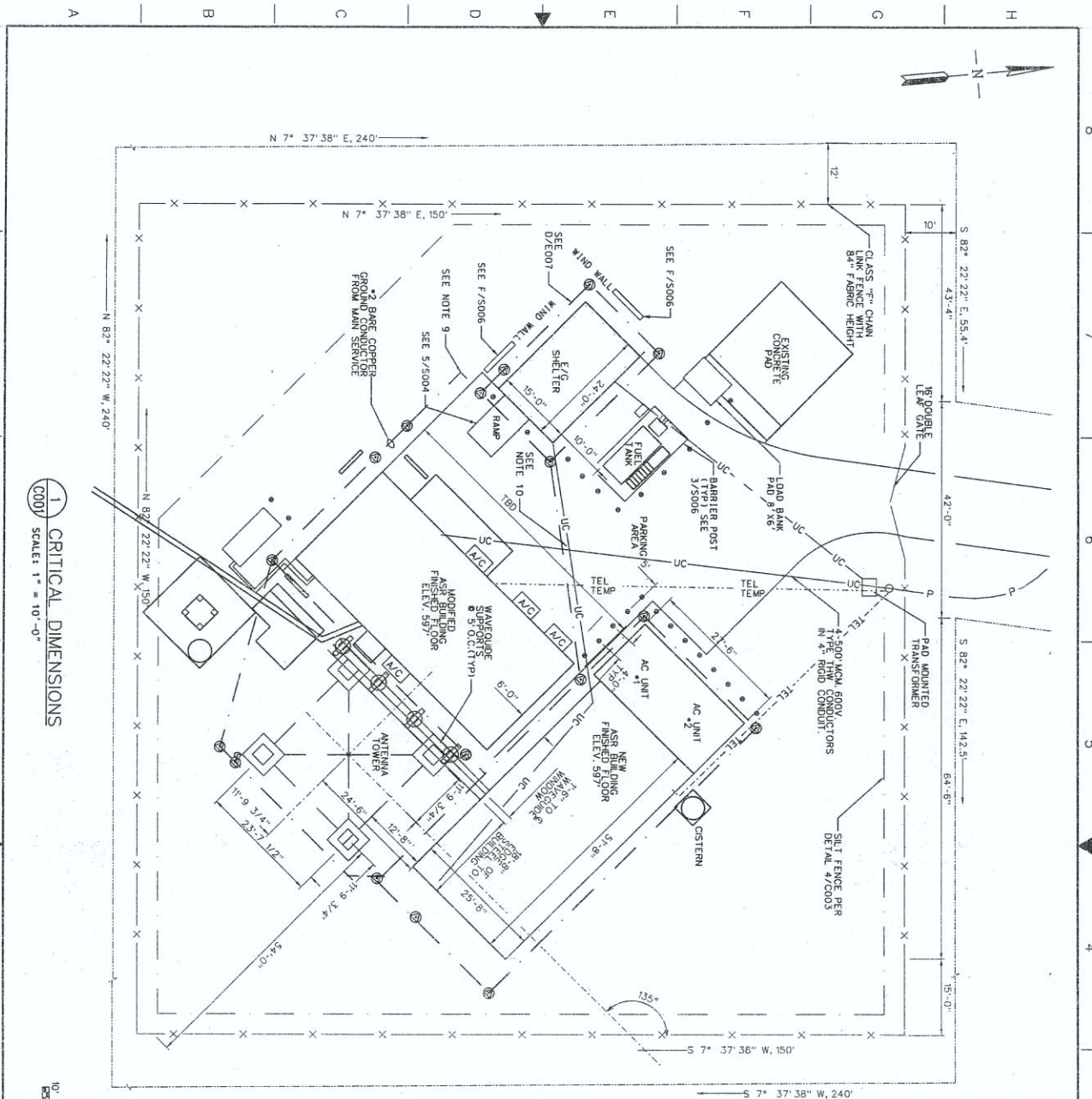
DWG. NO.	REV.	DATE	DESCRIPTION

3. THE PROJECT SHALL BE COORDINATED AND PHASED TO ELIMINATE ALL OF THE OLD RADAR BUILDING AND BE SUBJECT TO ENVIRONMENTAL OPERATIONS.
1. DEDUCT THE BUILDING'S SECTIONS, INCLUDING THE FLOOR TILE AND CEILING, AND CONSIDER THE REMOVAL OF THE BUILDING'S INTERIOR AND EXTERIOR ALL OF THE PROPER HEALTH AND SAFETY REGULATIONS APPLYING.
2. BUILD THE NEW ENGINE/GENERATOR BUILDING AND FUEL TANK FACILITIES.
3. INSTALL NEW HVAC (5 TON) UNITS INTO OLD BUILDING AS DIRECTED BY RESIDENT ENGINEER.
4. REMOVE THE OLD HVAC UNITS AND TURN THEM OVER TO THE FAA.
5. INSTALL THE TEMPORARY WALL TO THE RADAR BUILDING BEHIND THE RELOCATION INSIDE THE BUILDING.
6. DEMOLISH THE ABANDONED END OF THE OLD RADAR BUILDING TO EDGE OF BUILDING.
7. BUILD THE NEW RADAR BUILDING TOTAL.
6. BUILD LOAD BANKS, WAVE GUIDE SUPPORT STRUCTURES AND RADAR AND UPS SYSTEM WITH LIGHTS. FACILITY INSPECTION INCLUDING E/G AND MILESTONE. BUILDING OCCUPANCY DATE
9. FAA BEGINS RELOCATION OF RADAR ELECTRONICS EQUIPMENT.
10. REMOVAL OF OLD E/G AND TEMPORARY 5 TON HVAC UNITS TO FAA.
11. DEMOLISH OLD BUILDING.
12. ASPHALT THE PARKING AREA AND CLEAN UP SITE. PROJECT COMPLETION.

## NOTES

- THIS PROJECT SHALL BE COORDINATED AND PHASED TO ELIMINATE OPERATIONS OF THE RADAR FACILITY AND AIR TRAFFIC CONTROL BUILDING.
1. DEMOLISH THE OLD UPS BUILDING, THE FLOOR TILE AND PLASTIC ALL OF THE PROPER HEALTH AND SAFETY REGULATIONS APPLYING.
2. BUILD THE NEW ENGINE/GENERATOR BUILDING AND FUEL TANK FACILITIES.
3. INSTALL NEW HVAC (5 TON) UNITS INTO OLD BUILDING AS DIRECTED BY RESIDENT ENGINEER.
4. REMOVE THE OLD HVAC UNITS AND TURN THEM OVER TO THE FAA. INSTALL THE TEMPORARY EXIST WALL TO THE RADAR BUILDING BEFORE CUTTING THE WALL AND ROOF. FAA PERSONNEL TO PERFORM ELECTRONIC DEMOLITION. ABANDONED END OF THE OLD RADAR BUILDING TO EDGE OF BUILDING.
5. BUILD THE NEW RADAR BUILDING TOTAL.
6. BUILD THE NEW RADAR BUILDING TOTAL.
7. BUILD OLD PLANS HAVE GUIDE SUPPORT STRUCTURES AND RADAR POWER CONDUITS IN LEVELS. FACILITY INSPECTION INCLUDING E/G AND UPS SYSTEM.
8. MILESTONE: BUILDING OCCUPANCY DATE
9. FAA BEGINS RELOCATION OF RADAR ELECTRONICS EQUIPMENT.
10. REMOVAL OF OLD E/G AND TEMPORARY 5 TON HVAC UNITS TO FAA.
11. DEMOLISH OLD BUILDING.
12. ASPHALT THE PARKING AREA AND CLEAN UP SITE. PROJECT COMPLETION.

ISSUED FOR: CONSTRUCTION



1 CRITICAL DIMENSIONS  
SCALE: 1" = 10'-0"

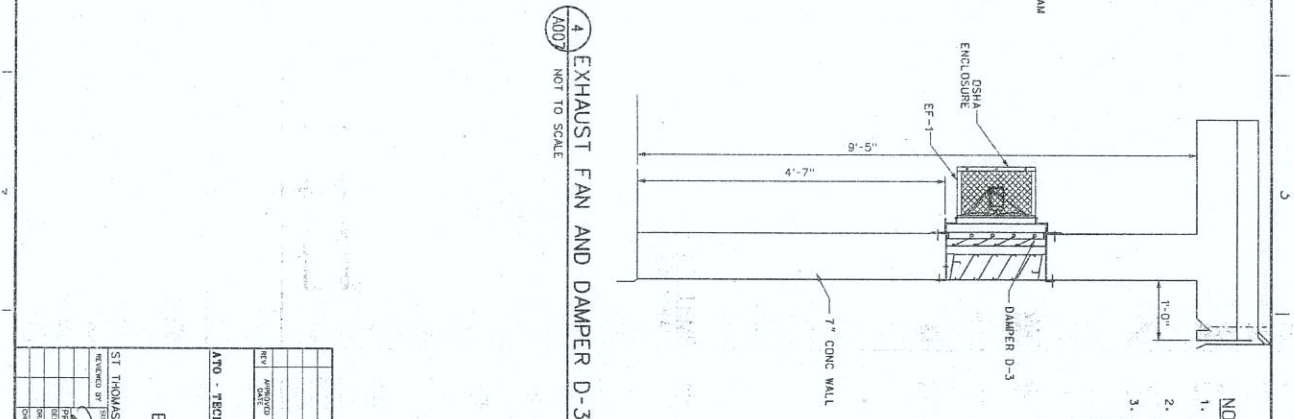
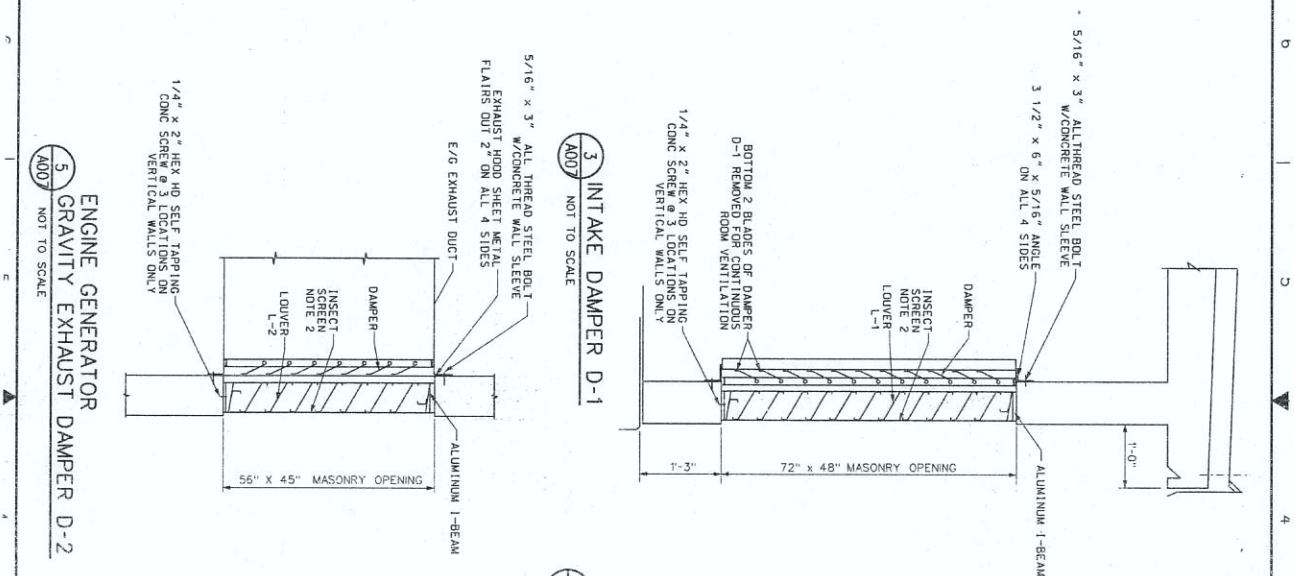
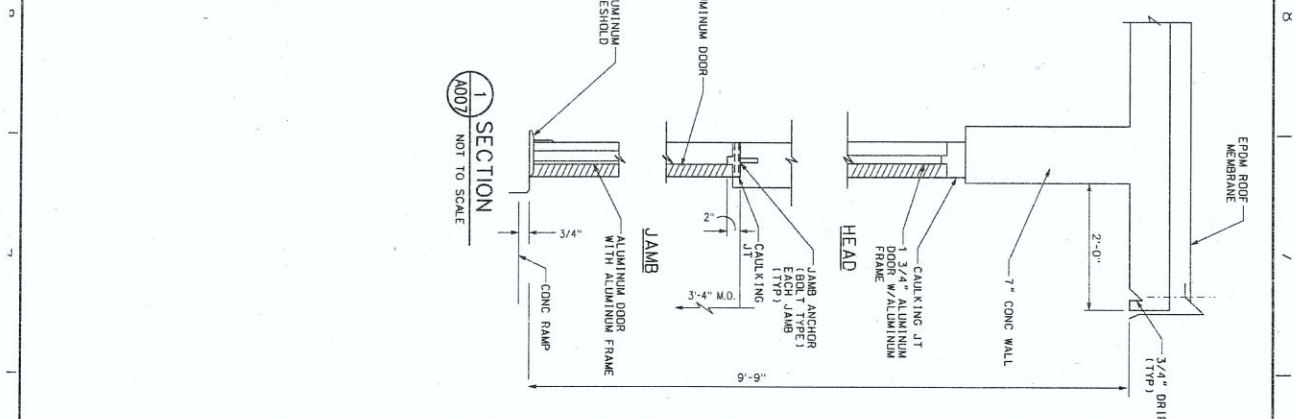
0 10' 20'  
SCALE: 1" = 10'

### GENERAL NOTES

1. CONCRETE SHALL HAVE A MINIMUM 7 DAYS CYLINDER COMPRESSIVE STRENGTH OF 3000 PSI.
2. ALL REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL BARS TO ASTM A615 GRADE 60.
3. WELDED WIRE FABRIC SHALL CONFORM TO SPECIFICATIONS FOR WELDED WIRE FABRIC FOR CONCRETE REINFORCEMENT (ASTM A185).
4. MINIMUM CONCRETE PROTECTION SPACES AND HOOKS FOR REINFORCING STEEL SHALL CONFORM TO ACI 318.
5. EXPOSED CONCRETE SLABS SHALL HAVE 3/4" CHAMFERED EDGES.
6. ALL CONCRETE WORK SHALL COMPLY TO ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND CONCRETE REINFORCING STEEL (CRSI), MANUAL OF STANDARD PRACTICE.
7. CONCRETE MATERIALS SHALL CONFORM TO ASTM C 150, TYPE 1.
8. AGGREGATE MATERIALS SHALL CONFORM TO ASTM C 33, SIZE 57.
9. CONTRACTOR SHALL EXTERIORLY WELD THE NEW 4x0 GROUND GROUND COUNTERPOISE TO EXISTING #2 COPPER GROUND CONDUCTOR. CONTROLLER SHALL VERIFY DEPTH OF UNDERGROUND POWER CONDUITS FROM TRANSFORMER TO EXISTING BUILDING PRIOR TO INSTALLATION OF NEW CROSSING POWER AND SIGNAL WIRING.
10. CONTRACTOR SHALL VERIFY DEPTH OF UNDERGROUND POWER CONDUITS FROM TRANSFORMER TO EXISTING BUILDING PRIOR TO INSTALLATION OF NEW CROSSING POWER AND SIGNAL WIRING.

ST. THOMAS		CIRCUIT E. KLINE AIRPORT	
DESIGNED BY	PROJECT ENGINEER	CHECKED BY	DATE
REVIEWED BY	DATE	DATE	DATE
DEPARTMENT OF TRANSPORTATION		3000778	
FEDERAL AVIATION ADMINISTRATION		3000778	
ATO - TECHNICAL OPERATIONS		3000778	
ASR		3000778	
REPLACE ASR BUILDING		3000778	
INTERIM SITE PLAN		3000778	
ISSUED FOR CONSTRUCTION		3000778	

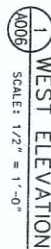
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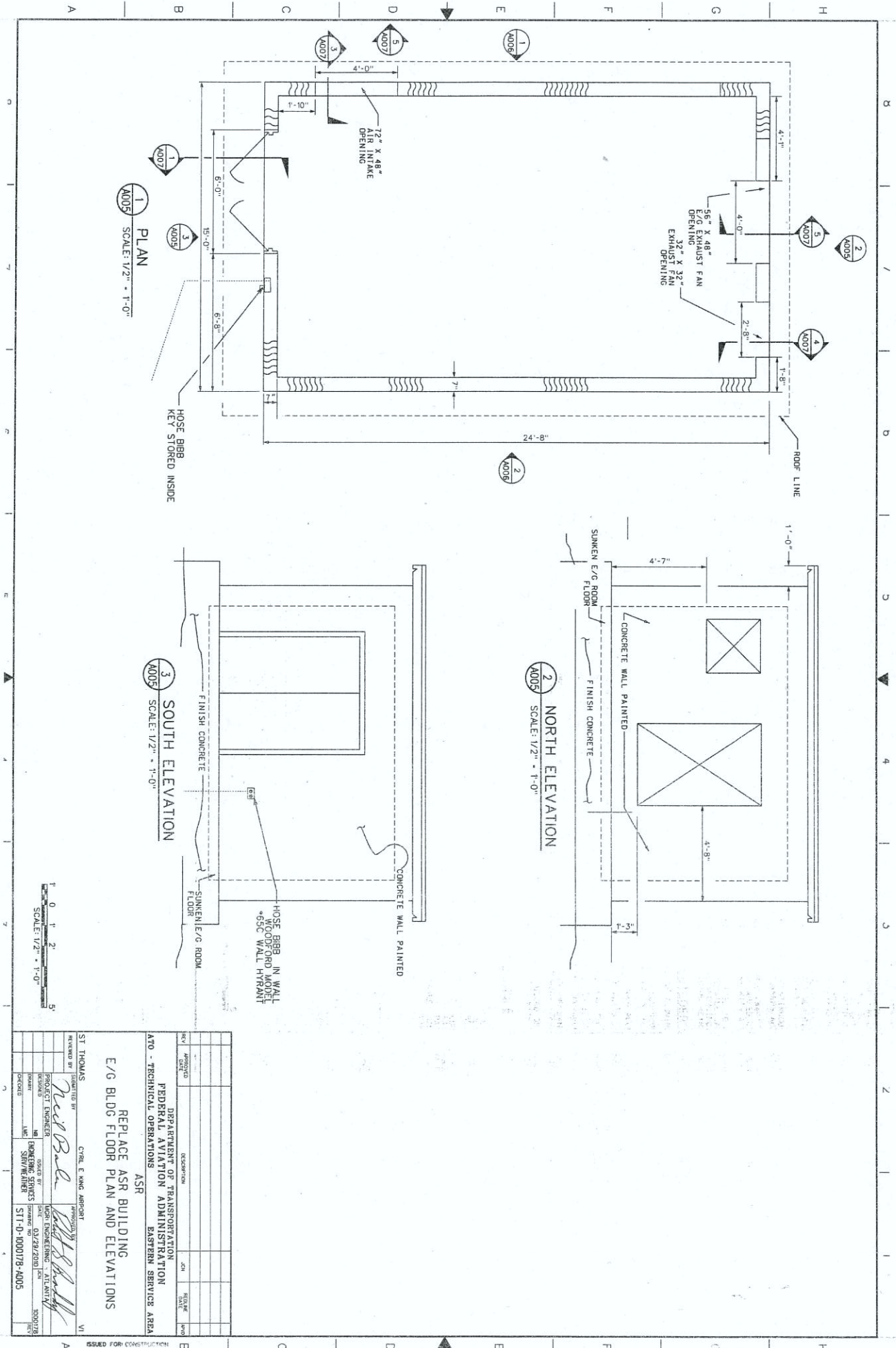
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2	ASR					
3	ASR					
4	ASR					
5	ASR					
6	ASR					
7	ASR					
8	ASR					
9	ASR					
10	ASR					

ST THOMAS  
CYRIL E. HENDRICKS  
PROJECT ENGINEER  
FEDERAL AVIATION ADMINISTRATION  
ATO - TECHNICAL OPERATIONS  
EASTERN SERVICE AREA  
REPLACE ASR BUILDING  
E/G BLDG SECTIONS AND DETAILS  
ISSUED FOR CONSTRUCTION

- NOTES**
1. WIDTH OF WALL SLEEVE DETERMINED BY ACTUAL EQUIPMENT FURNISHED AND MINIMUM CLEARANCES
  2. INSECT SCREENING SHALL BE 18 GAUGE NO 18 MESH STAINLESS STEEL.
  3. FASTEN LOUVER TO MASONRY WALL BY USING 1/4" DIA. STAINLESS STEEL ANCHORS WITH EXP. STEEL DRAIN IN EXPANSION ANCHORS WITH EXP. STEEL STAINLESS STEEL #1/4"-20 x 1/2 BINDING HEAD SLOTTED MACHINE SCREWS.



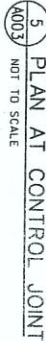
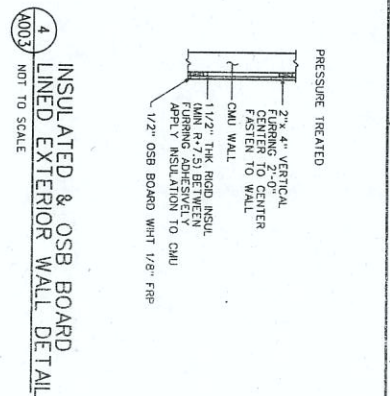
ISSUED FOR CONSTRUCTION ☐



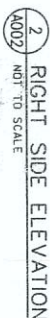
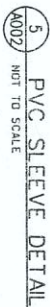
REVIEWED BY	CYRIL E. KING ARCHITECT	DATE	02/23/2011
PROJECT ENGINEER	WILLIAM B. KING	DATE	02/23/2011
DESIGNED BY	WILLIAM B. KING	DATE	02/23/2011
CHECKED BY	WILLIAM B. KING	DATE	02/23/2011
DATE	02/23/2011	TIME	12:00 PM
PROJECT	REPLACE ASR BUILDING	LOCATION	ST. THOMAS
DESCRIPTION	REPLACE ASR BUILDING	CLIENT	FEDERAL AVIATION ADMINISTRATION
PROJECT NO.	STT-D-1000178-4005	PROJECT NAME	REPLACE ASR BUILDING
PROJECT LOCATION	ST. THOMAS	PROJECT TYPE	REPLACE ASR BUILDING
PROJECT STATUS	ASR	PROJECT PHASE	REPLACE ASR BUILDING
PROJECT OWNER	FEDERAL AVIATION ADMINISTRATION	PROJECT CONTACT	WILLIAM B. KING
PROJECT CONTACT	WILLIAM B. KING	PROJECT PHONE	703-581-1111
PROJECT FAX	703-581-1111	PROJECT EMAIL	WILLIAM.B.KING@ATLANTA-FLA.AA
PROJECT WEBSITE	WWW.WILLIAMBKING.COM	PROJECT ADDRESS	1000 17TH ST NW, SUITE 1000, ATLANTA, GA 30334
PROJECT ZIP	30334	PROJECT CITY	ATLANTA
PROJECT STATE	GA	PROJECT COUNTRY	USA
PROJECT PROJECT	STT-D-1000178-4005	PROJECT PROJECT	STT-D-1000178-4005



ISSUED FOR CONSTRUCTION ☐

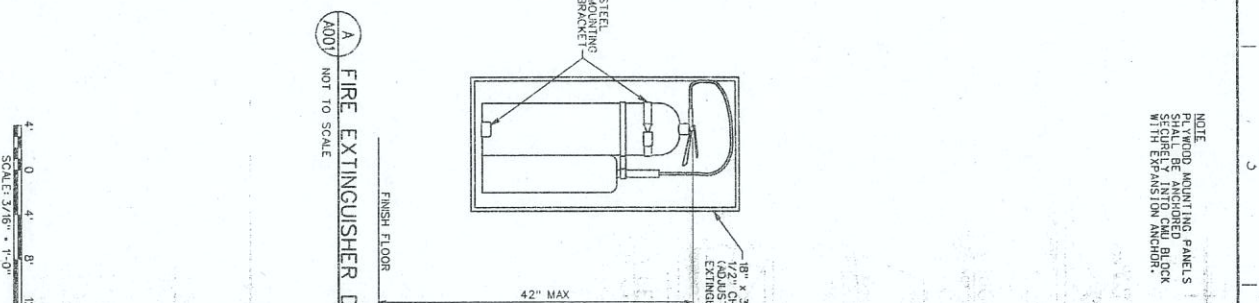


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- NOTES**
1. EXTERIOR ROOFING MEMBRANE SHALL BE WHITE, 60 MIL THICKNESS, TYPE I, SINGLE PLY, FIRE-RETARDANT CLASS II, WITH A MINIMUM MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. THIS ROOFING MEMBRANE SHALL BE ADHERED TO 100% OF THE CONCRETE DECKING WITH BONDING ADHESIVE.
  2. EXTERIOR BUILDING TO BE PAINTED WHITE PER SPEC. 09900.

[illegible]



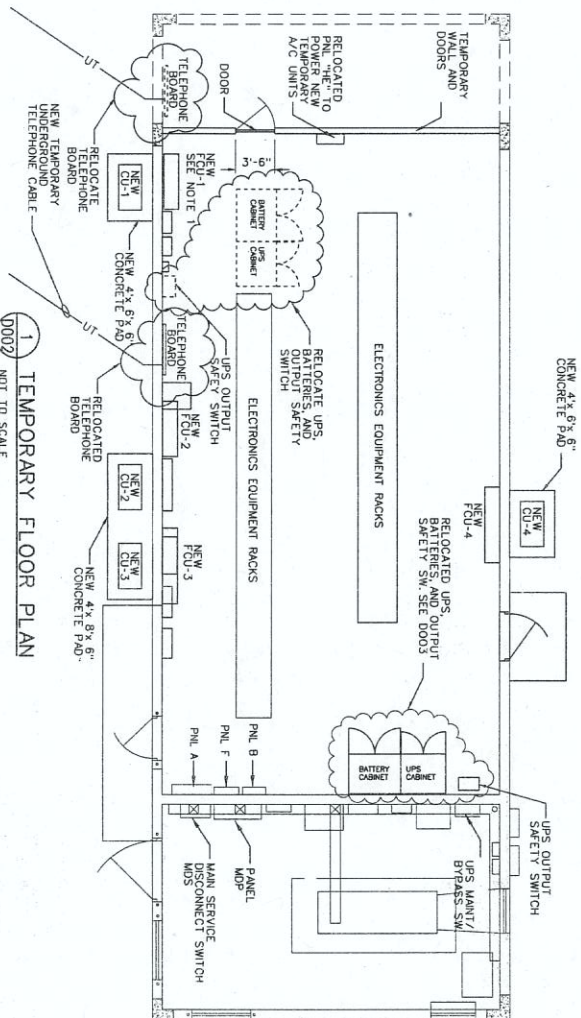
**LEGEND**

CMU - CONCRETE MASONRY UNIT  
C.J. - CONTROL JOINT  
AFF - ABOVE FINISHED FLOOR  
GRS - GALVANIZED RIGID STEEL  
CND.C - CONDUIT  
VCT - VINYL COMPOSITE TILE

1. TYPE: CARBON DIOXIDE
2. UL RATING: 10-B-C
3. NOMINAL CAPACITY: 15 POUNDS
4. MATERIAL: RED GLASS POLYESTER COATED ALUMINUM
5. SUPPORT BRACKET: RED ENAMEL STEEL W/ BRACKET BY SAME MANUFACTURER AS EXTINGUISHER
6. MANUFACTURER: J.L. INDUSTRIES "SENTINEL #15"
7. LAMER MODEL #C075

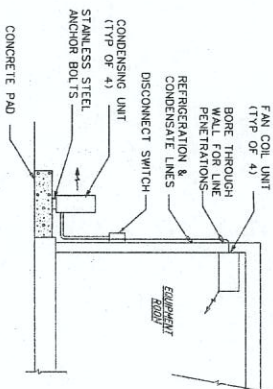
A FIRE EXTINGUISHER DETAIL  
A001 NOT TO SCALE

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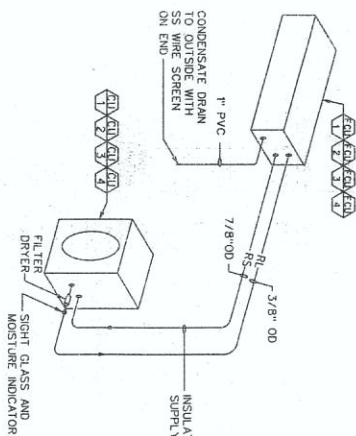


AIR CONDITIONING UNIT SCHEDULE										
EQUIPMENT NUMBER	MANUFACTURER	MODEL AND TYPE	CFM (HGT)	SEER	VOLTS 60HZ	TOTAL INPUT WATTS	CAPACITY BTU/H	LIQUID OD (IN)	SUCTION OD (IN)	MAXIMUM HEIGHT DIFFERENCE (FT)
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165
FCU-1, 2, 3, 4	MITSUBISHI	PKA-4-305A	705	13.0	208-1	4400	30,000	3/8	5/8	165

NOTE: POWER FOR EACH FCU UNIT IS FED FROM CONDENSING UNIT



3. REFRIGERATION PIPING SCHEMATIC



- NOTES
1. NEW FAN COIL AND CONDENSING UNITS SHALL BE FIELD LOCATED TO AVOID CONFLICTS WITH EXISTING EQUIPMENT.
  2. RELOCATE EXISTING PANEL HE TO NEW LOCATION. REMOVE EXISTING BREAKERS AS NECESSARY TO INSTALL FOUR NEW 30A/2P BREAKERS FOR THE NEW A/C UNITS. INSTALL FOUR 3/4" CONDUIT W/2" MIN. RIGID TO NEW A/C UNITS. USE 1/2" CONDUIT FOR EXISTING DISCONNECTS. USE 1/2" CONDUIT BETWEEN DISCONNECT AND CONDENSING UNITS WITH 2" MIN. #12 GRN.

ABBREVIATIONS

CFM - CUBIC FEET PER MINUTE

CU - CONDENSING UNIT

DWG - DRAWING

FCU - FAN COIL UNIT

GFE - GOVERNMENT FURNISHED

HP - HORSEPOWER

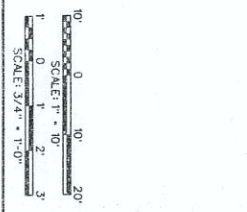
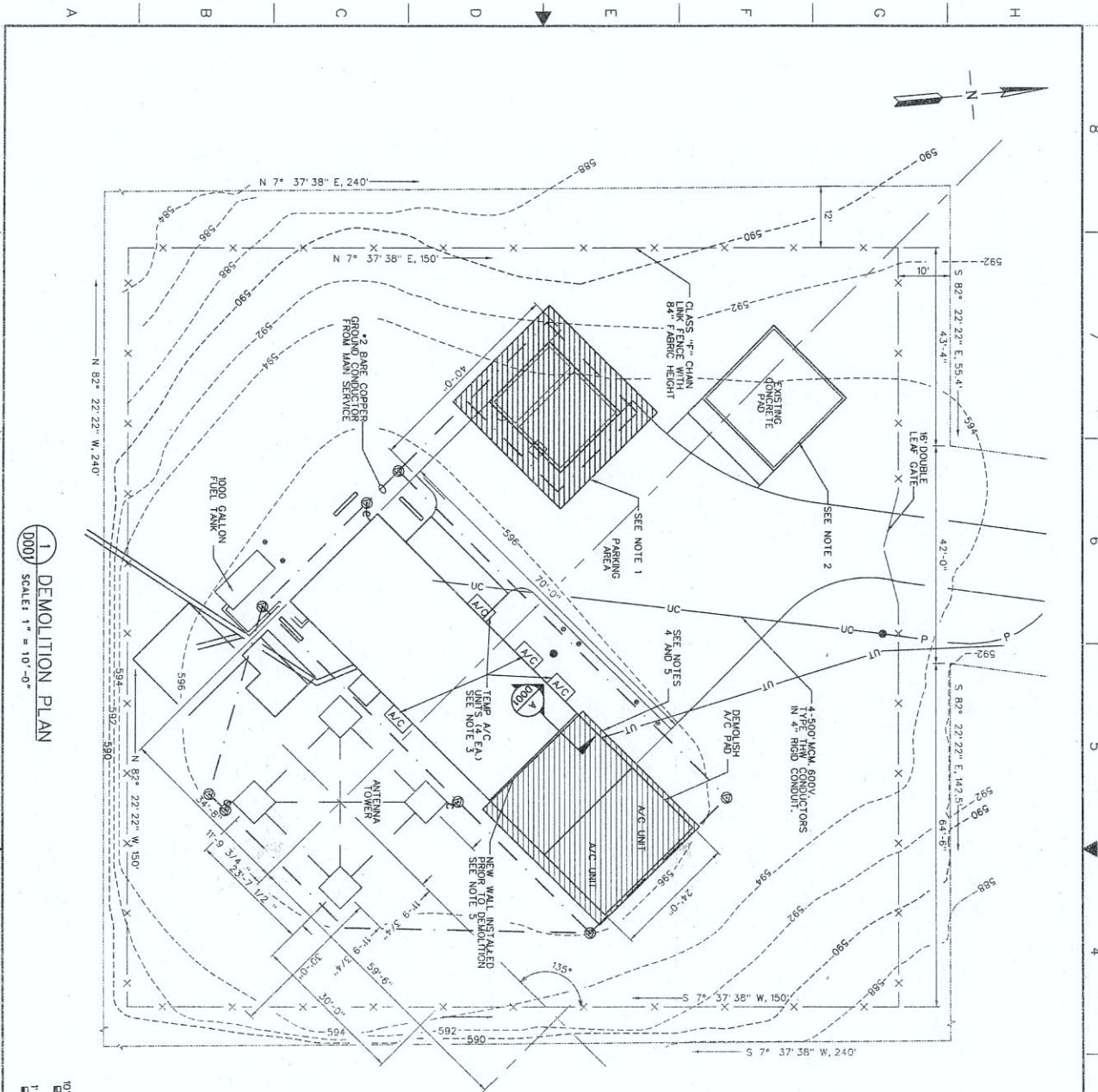
OD - OUTSIDE DIAMETER

RM - REVOLUTION PER MINUTE

SCM - STANDARD CONDITION

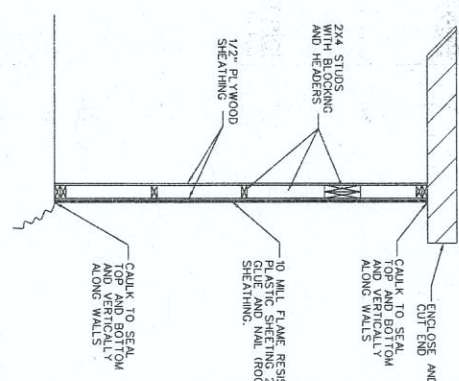
TYP - TYPICAL

ST THOMAS		CIVIL, E. KING AIRPORT	
DESIGNED BY	PROJECT ENGINEER	DATE	02/28/2011
CHECKED BY	DATE	02/28/2011	0000728
DEPARTMENT OF TRANSPORTATION		FEDERAL AVIATION ADMINISTRATION	
ATO - TECHNICAL OPERATIONS		EASTERN SERVICE AREA	
REPLACE ASR BUILDING		DEMOLITION	
FLOOR PLAN		VI	
ISSUED FOR CONSTRUCTION		VI	



ST THOMAS		CITY OF KING ARCADE	
DESIGNED BY	PROJECT ENGINEER	DATE	10/07/08
PROJECT	DEMOLITION	DATE	02/29/2010
BY	ENGINEERING SERVICES	DATE	10/07/08
BY	SERVICES	DATE	10/07/08
SIT-D-000178-0001		SIT-D-000178-0001	

**A TEMPORARY WALL SECTION**  
SCALE: 3/4" = 1'-0"



- NOTES**
1. DEMOLISH OLD TWO ROOM BUILDING
  2. CUT-OFF REBAR AT SURFACE OF SLAB
  3. SEE DRAWING SIT-D-1000178-0002 FOR TEMPORARY A/C UNIT INSTALLATION.
  4. AFTER THE INSTALLATION OF NEW A/C UNITS, CONTRACTOR SHALL REMOVE OUTDOOR A/C UNITS AND TURN OVER TO FAA AND REMOVE DUCTWORK WITHIN 16' OF THE EAST WALLS TO BE REMOVED FROM THE SITE.
  5. A TEMPORARY WALL SHALL BE CONSTRUCTED INSIDE OF THE BUILDING TO SEAL THE EQUIPMENT ROOM FROM THE DEMOLITION AREA. THE WALL SHALL BE CONSTRUCTED WITH 2x4 STUDS, 1/2" PLYWOOD SHEATHING AND POLYETHYLENE SHEATHING BACK TO MILLS. WOOD FRAME IS TO BE SECURED TO WALLS, CEILING, AND FLOOR. CALK THE PERIMETER TO INSURE WATER TIGHT CONSTRUCTION.
  6. REMOVE AND TERMINATE ELECTRICAL DEVICES IN THE DEMOLITION ZONE.
  7. AFTER THE TEMPORARY WALL IS FINISHED AND THE EMPTY DEMOLITION AREA IS SECURED, THE CONTRACTOR SHALL DEMOLISH THE REMAINING WALLS AND FLOOR AND FINISH WITH THE TEMPORARY WALL ON THE WALLS AND FLOOR PER THE RESIDENT ENGINEER.

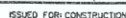


- FENCE GROUNDING  
TO BE IMPLEMENTED ON NEW OR  
RELOCATED FENCE SECTIONS ONLY.

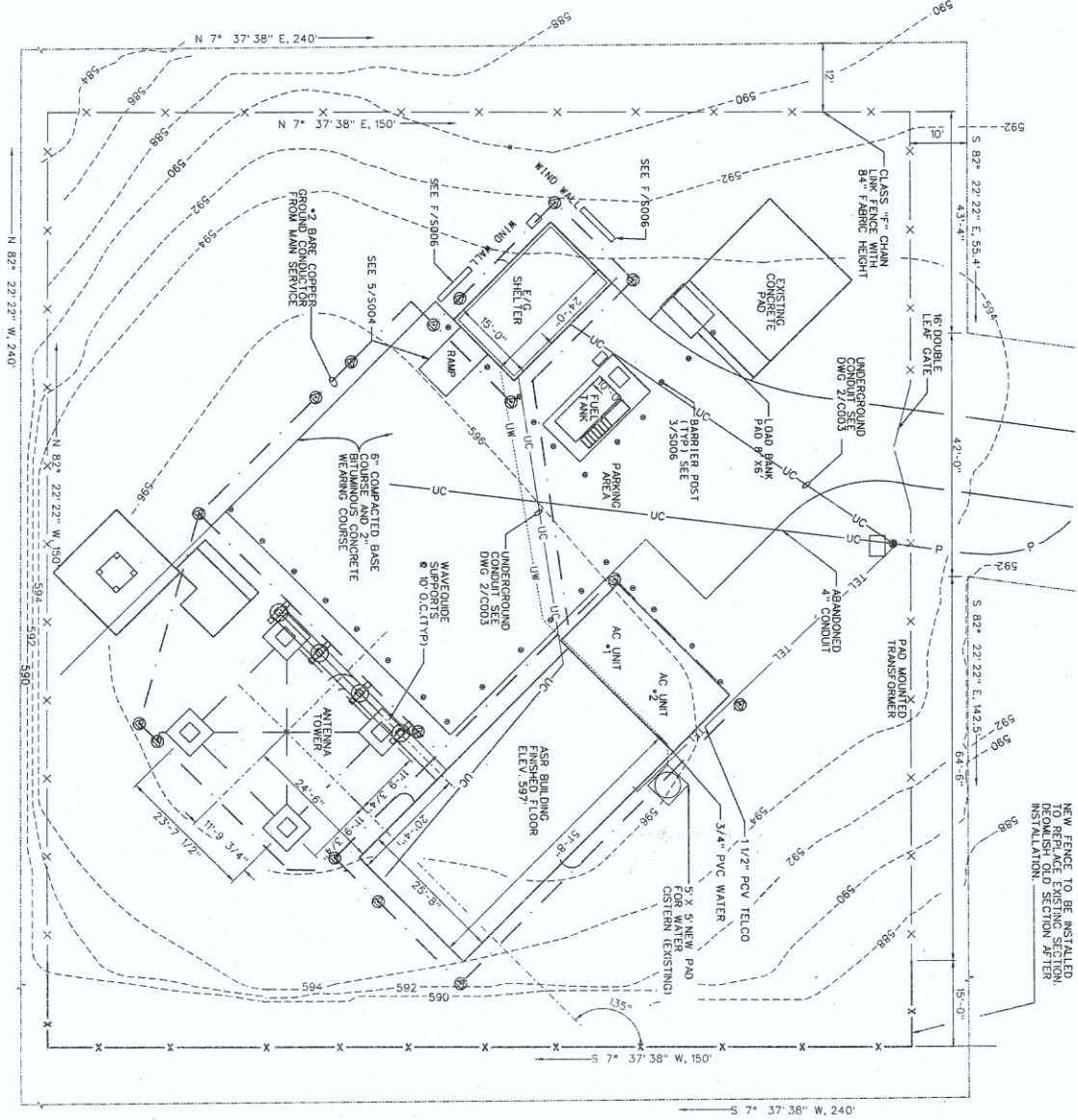
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- [illegible]



# 1 NEW SITE PLAN SCALE: 1" = 10'-0"



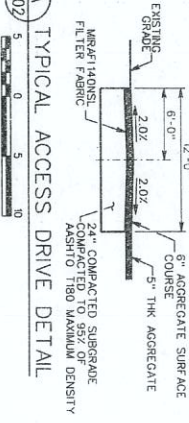
NEW FENCE TO BE INSTALLED TO REPLACE EXISTING SECTION. DEMOLISH OLD SECTION AFTER INSTALLATION.

0 10' 20'  
SCALE: 1" = 10'-0"

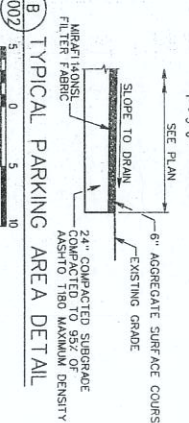
## NOTES

1. CONCRETE SHALL HAVE A MINIMUM 7 DAYS CYLINDER COMPRESSIVE STRENGTH OF 3000 PSI.
2. ALL REINFORCING STEEL SHALL BE DEFORMED BULLET STEEL BARS.
3. WELDED WIRE FABRIC SHALL CONFORM TO SPECIFICATIONS FOR WELDED WIRE FABRIC FOR CONCRETE REINFORCEMENT.
4. MINIMUM CONCRETE PROTECTION, SPLICES AND HOOKS FOR REINFORCING STEEL SHALL CONFORM TO ACI 318M BUILDING CODE.
5. EXPOSED CONCRETE SHALL HAVE A 24" MAXIMUM DEPTH OF CRACKS. CRACKS SHALL BE REPAIRED WITH EPOXY RESIN.
6. REPAIRS TO CONCRETE SHALL BE DONE BY A LICENSED CONCRETE REPAIRER.
7. CONTRACTOR TO REMOVE GUARD RAIL AND OLD RADAR BUILDING AFTER EQUIPMENT IS COVERED TO RESIDENT ENGINEER.
8. CONTRACTOR TO PAVE NEWLY EXPOSED AREA AND TRENCH LINES WITH ASPHALT BITUMINOUS CONCRETE.
9. CONTRACTOR TO MAINTAIN PROPER DRAINAGE RELATIONSHIP IS CRITICAL.
10. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.
11. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.
12. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.
13. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.
14. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.
15. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.
16. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.
17. THE TOP ELEVATION OF THE GROUTED TOWER PIERS (BOTTOM OF BASE) SHALL BE 597.00.

## A TYPICAL ACCESS DRIVE DETAIL SCALE: 1" = 10'-0"



## B TYPICAL PARKING AREA DETAIL SCALE: 1" = 10'-0"



REV	DATE	BY	CHKD	DESCRIPTION
1	02/29/2011	ST THOMAS	ST THOMAS	ISSUED FOR CONSTRUCTION

DESIGNED BY	ST THOMAS	DATE	02/29/2011
CHECKED BY	ST THOMAS	DATE	02/29/2011
APPROVED BY	ST THOMAS	DATE	02/29/2011

PROJECT	REPLACE ASR BUILDING
CLIENT	FEDERAL AVIATION ADMINISTRATION
LOCATION	EASTERN SERVICE AREA
PROJECT NO.	ATLANTA
PROJECT NO.	ATLANTA
PROJECT NO.	ATLANTA

A

B

C

D

E

F

G

H

CONDUIT AND CABLE SCHEDULE (POWER)

FEEDER NUMBER	FROM	TO	CONDUCTORS		GND OF CONDUIT	NO. OF RIMS	CONDUIT SIZE	REMARKS
			NO.	SIZE				
[101]	UTILITY RM	METERING CABINET	4	250 ICM	-	2	2 1/2"	SEE DWG E004
[102]	METERING CABINET	SERVICE DISC SW	4	250 ICM	-	2	2 1/2"	SEE DWG E004
[103]	SERVICE DISC SW	AIS/PPASS	4	250 ICM	#2	2	2 1/2"	SEE DWG E004
[104]	AIS/PPASS	SW (E004)	4	250 ICM	#2	2	2 1/2"	SEE DWG E004
[105]	SW (E004)	PANEL FPA	4	250 ICM	#2	2	2 1/2"	SEE DWG E004
[106]	PANEL FPA	A/C #1 & DISC SW	3	#10	#6	1	1 1/2"	SEE DWG E004
[107]	PANEL FPA	A/C #2 & DISC SW	3	#10	#6	1	1 1/2"	SEE DWG E004
[108]	PANEL FPA	PANEL E1A	4	#2	#6	1	1 1/4"	SEE DWG E004
[109]	PANEL FPA	UPS STATIC BYPASS SW	4	#10	#6	1	1 1/2"	SEE DWG E004
[110]	PANEL FPA	UPS UNIT	4	#10	#4	1	2"	SEE DWG E004
[111]	PANEL FPA	UPS MAINT. BYPASS SW	4	#10	#6	1	1 1/2"	SEE DWG E004
[112]	UPS OUTPUT	SW (E004)	3	#10	#6	1	1 1/2"	SEE DWG E004
[113]	SW (E004)	UPS MAINT. BYPASS	3	#10	#6	1	1 1/2"	SEE DWG E004
[114]	UPS MAINT. BYPASS SW	SW (E004)	3	#10	#6	1	1 1/2"	SEE DWG E004
[115]	SW (E004)	UPS LOAD BANK	3	#10	#6	1	-	SEE DWG E004 AND NOTE 1
[116]	UPS MAINT. BYPASS SW	SW (E004)	3	#10	#10	1	3/4"	SEE DWG E004
[117]	SW (E004)	TPSS	3	#10	#10	1	3/4"	SEE DWG E004
[118]	UPS MAINT. BYPASS SW	ISOLATION FIRM	3	#10	#6	1	1 1/2"	SEE DWG E004 AND NOTE 2
[119]	ISOLATION FIRM	PANEL CP	4	#10	#6	1	1 1/2"	SEE DWG E004
[120]	-	-	-	-	-	-	-	-
[121]	PANEL CP	PANEL CFA	4	#2	#8	1	WIREWAY	SEE DWG E004
[122]	PANEL CP	PANEL CFB	4	#2	#8	1	WIREWAY	SEE DWG E004
[123]	PANEL CP	PANEL CFI	4	#2	#8	1	1 1/4"	SEE DWG E004
[124]	PANEL CP	TPSS	4	#10	#10	1	3/4"	SEE DWG E004
[125]	SW (E004)	SW (E004)	4	#10	#10	1	3/4"	SEE DWG E004
[126]	SW (E004)	TPSS	4	#10	#10	1	3/4"	SEE DWG E004
[127]	AIS/AMP	E/C BREAKER	4	250 ICM	#2	2	2 1/2"	SEE DWG E004
[128]	E/C BREAKER	SW (E004)	3	#10	#2	2	2"	SEE DWG E004
[129]	SW (E004)	E/C LOAD BANK	3	#10	#2	2	2"	SEE DWG E004
[130]	SERVICE DISC SW	SW (E004)	4	#4	#4	1	1"	SEE DWG E004
[131]	SW (E004)	TPSS	4	#4	#4	1	1"	SEE DWG E004
[132]	AIS/AMP	PANEL E/G	4	#1	#8	1	1 1/4"	SEE DWG E004

NOTES:

1. THE CONDUCTORS FOR THE UPS LOAD BANK ARE PROVIDED WITH TERMINATIONS FOR THE CONNECTIONS TO PROVIDE CABLE LOAD BANK SAFETY SWITCH.
2. CONNECT TRANSFORMER SECONDARY SIDE NEUTRAL TO COUNTERPOISE.

CONDUIT AND CABLE SCHEDULE (CONTROL)

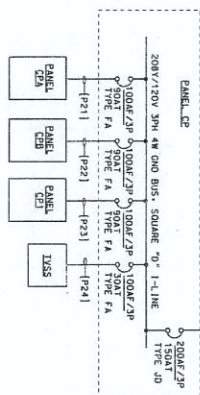
FEEDER NUMBER	FROM	TO	CONDUCTORS		GND OF CONDUIT	NO. OF RIMS	CONDUIT SIZE	REMARKS
			NO.	SIZE				
[01]	E/C CONTROL PANEL	GENERATOR DAY TANK	2	#14	#14	1	3/4"	SEE DWG E013
[02]	LOAD BANK CONTROL PNL	AIS/AMP	2	#14	#14	1	3/4"	SEE DWG E013
[03]	AIS/AMP	E/C LOAD BANK	2	#14	#14	1	3/4"	SEE DWG E013
[04]	UPS	E/C	2	#14	#14	1	3/4"	SEE DWG E013
[05]	UPS	REMOTE MONITOR PANEL	-	2-THREADED PAIR CABLES	-	1	3/4"	SEE DWG E013
[06]	E/C LOAD BANK	E/C LOAD BANK CONTROL PANEL	12	#14	#14	1	3/4"	SEE DWG E004 AND E013
[07]	BATTERY CHARGER	E/C CONTROL PANEL	3	#14	#14	1	3/4"	SEE DWG E013
[08]	AIS/AMP	E/C CONTROL PANEL	2	#14	#14	1	3/4"	SEE DWG E013
[09]	E/C CONTROL PANEL	REMOTE EMERGENCY STOP SWITCH	2	#14	#14	1	3/4"	SEE DWG E013

REVIEW	DATE	REVISION	DATE	REVISION	DATE
DESIGNED BY	DATE	DESIGNED BY	DATE	DESIGNED BY	DATE
PROJECT ENGINEER	DATE	PROJECT ENGINEER	DATE	PROJECT ENGINEER	DATE
IN CHARGE	DATE	IN CHARGE	DATE	IN CHARGE	DATE
DATE	02/29/2010	DATE	02/29/2010	DATE	02/29/2010
PROJECT	STT-D-1000178-E005	PROJECT	STT-D-1000178-E005	PROJECT	STT-D-1000178-E005

ST THOMAS  
C/PL E KING AIRPORT  
REPLACE ASR BUILDING  
CONDUIT AND CABLE  
SCHEDULES

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
ATC - TECHNICAL OPERATIONS  
EASTERN SERVICE AREA

ISSUED FOR CONSTRUCTION



- [illegible]

1

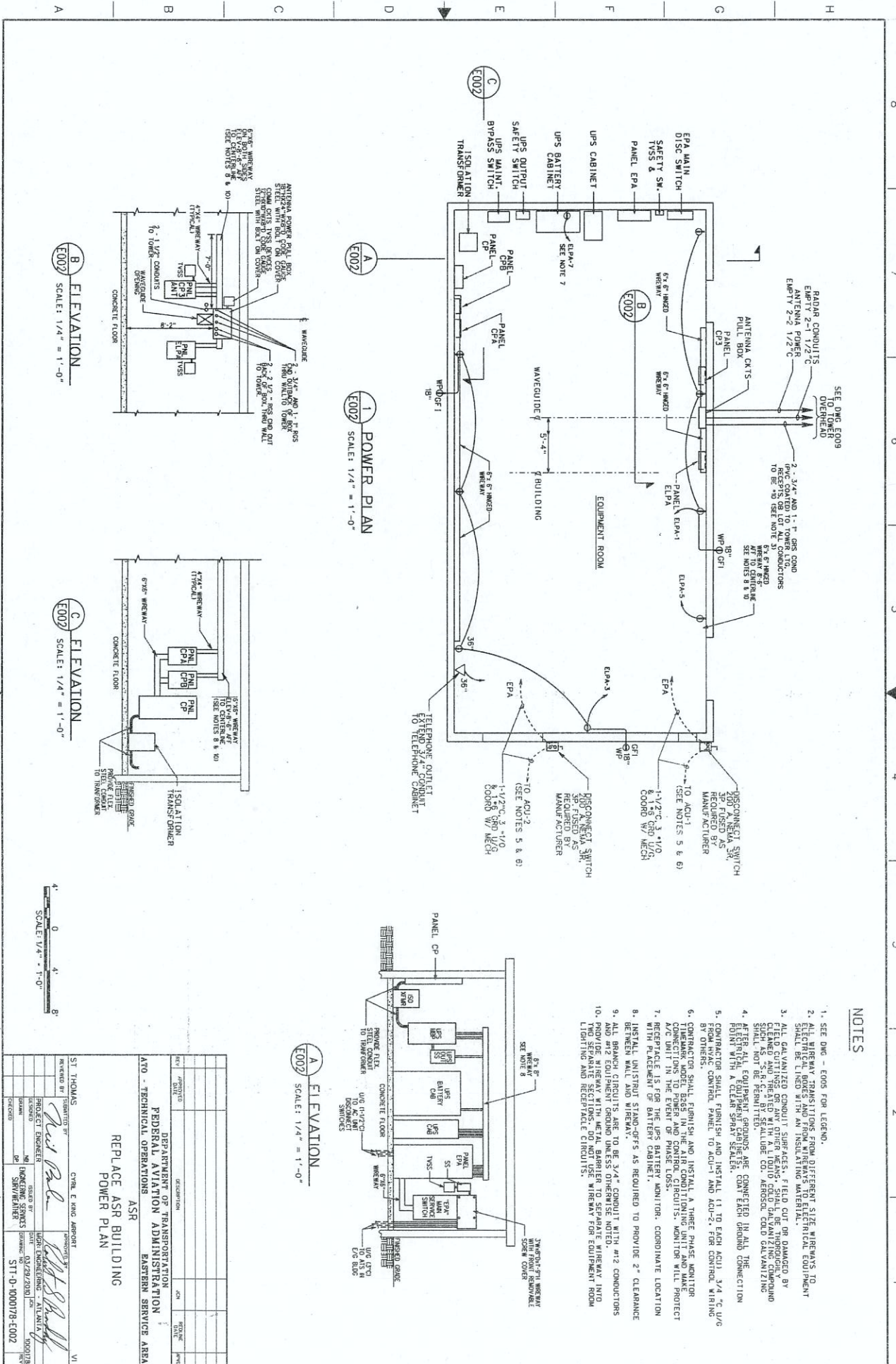
SINGLE-UNIT DOUBLE-STEM CANOPY TYPE  
SUPPORTS ARE NOT ACCEPTABLE FOR MOUNTAIN  
THE FLUORESCENT FIXTURES.

[illegible]

1 LIGHTING PLAN  
E003 NOT TO SCALE

[illegible]

ISSUED FOR: CONSTRUCTION

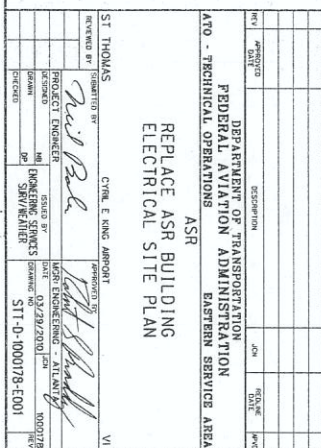


NO.	REVISION	DATE	BY	CHKD	DESCRIPTION
1	ASR	02/28/2010	ST THOMAS	ST THOMAS	REPLACE ASR BUILDING POWER PLAN

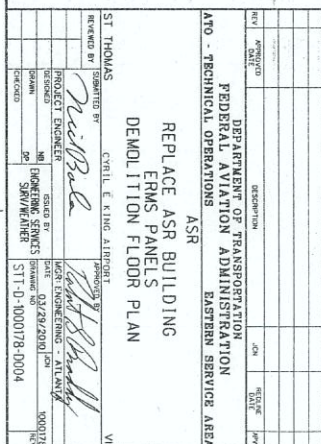
ST THOMAS  
CIVIL & MECHANICAL  
PROJECT ENGINEER  
DATE: 02/28/2010  
DRAWN BY: ST THOMAS  
CHECKED BY: ST THOMAS  
PROJECT: ASR  
SHEET: 01-000178-E002

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
EASTERN SERVICE AREA  
ASR  
REPLACE ASR BUILDING  
POWER PLAN

ISSUED FOR CONSTRUCTION



- NOTES**
1. ALL ITEMS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.
  2. ALL UNDERGROUND AND CONDUITS SHALL BE PVC COATED RGS.
  3. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF THE CONDUIT ENTRY INTO THE E/G AND ASR-8 BLDGS.



BOLD OBJECTS INDICATES EXISTING ERMS SYSTEM EQUIPMENT THAT IS TO BE REMOVED AND PROVIDED TO THE FAA AS SPARE EQUIPMENT BEFORE BUILDING DEMOLITION.

ASR  
REPLACE ASR BUILDING  
ERMS PANELS  
DEMOLITION FLOOR PLAN

ST THOMAS	CYRIL E KING AIRPORT
-----------	----------------------

REVIEWED BY

Reichle

	PROJECT ENGINEER	MCR
--	------------------	-----

DATE		ISSUED BY	
NO.		DE SIGNER	
ENGINEERING SERVICES			

[illegible][illegible]

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BOLD AREAS INDICATE NEW WORK.

NOTES

1. ALL CIRCUIT BREAKERS ARE 3 POLE UNLESS NOTED OTHERWISE.

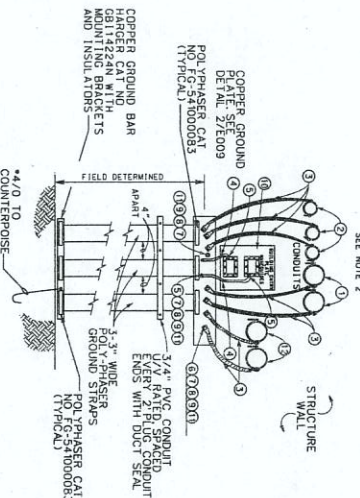
NOTES

1. ALL CIRCUIT BREAKERS ARE 3 POLE UNLESS NOTED OTHERWISE

2. EXTEND #2/0 GND TO BUILDING MAIN GROUND PLATE.
3. EXTEND #2/0 GND TO BUILDING #4/0 GROUNDING SYSTEM.
4. 2-#14/4, 3-#4" CONDUIT TO A15/81/15 1B2-364. THIS IS THE E/G LOAD BANK LOAD DUMP CIRCUIT.
5. 2-#14/4, 3-#4" CONDUIT TO UPS MAINTENANCE BYPASS SWITCH, CONNECT TO N.O. CONTACT ON AIR SOURCE BREAKER. THIS IS THE UPS LOAD BANK LOAD DUMP CIRCUIT.
6. #2 GROUNDING CONDUCTOR FROM LOAD BANK ENCLOSURE TO COUNTERPOISE. CONNECT TO COUNTERPOISE.
7. RELOCATE UPS CABINET, UPS BATTERY CABINET, AND UPS OUTPUT SWITCH TO NEW LOCATION SHOWN ON DRAWING DOOR. EXTEND INSTALLATION IS TEMPORARY THEREFORE CIRCUIT CONDUCTORS EXISTING UPS INPUT AND OUTPUT CIRCUITS TO NEW LOCATION.
8. EXPOSED FLEXIBLE CABLES, ALL FLEXIBLE CABLES ARE TO BE LOCATED AND PROTECTED TO PREVENT DAMAGE.
9. A/C UNITS TO BE REMOVED AND TURNED OVER TO RESIDENT ENGINEER. AFTER THE TEMPORARY CABLES AND INSTALLATION IS COMPLETED, THE TEMPORARY CABLES AND UNITS MAY BE REMOVED THEREFORE CIRCUIT CONDUCTORS MAY BE RUN WITHIN THE BUILDING TO BE LOCATED AND PROTECTED TO PREVENT DAMAGE.



ITEM#	DESCRIPTION
1	740 U-BOLT 3500 BU BRONZE
2	740 U-BOLT 3502 BU BRONZE
3	240 AEG. INSULATED CONDUIT
4	6" HD TANK INSULATION, GREEN
5	740 CHAIN LUB FOR MG AEG 34105
6	740 CHAIN LUB FOR 400 AEG 54167
7	BOLT, MACHINE 1/4"-11, 18-8 SS
8	WASHER, SPRING LOCK 1/4"-11, 18-8 SS
9	WASHER 1/4"X20 18-8 SS
10	POLY-THUNDER JUM-1117 425CC
11	NUT 1/4"X20 18-8 SS
12	740 U-BOLT 3503 BU BRONZE

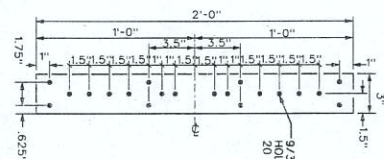


1. DO NOT CROSS CONDUCTOR WHEN ROUTING TO GROUND PLATE.
2. MAKE CONDUIT CLAMP CONNECTIONS AS CLOSE AS POSSIBLE TO BUILDING ENTRY POINT.
3. MINIMUM 8" RADIUS ON ALL CONDUCTORS.
4. TREAT ALL COMPRESSION FITTINGS WITH "NO OX" BEFORE ASSEMBLY.
5. FINAL CONNECTIONS TO WAREHOUSE WILL BE BY OTHERS.

1  
E009

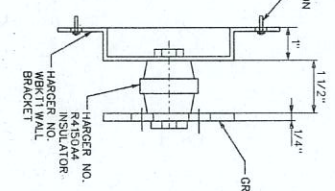
ASR-9 WALL MOUNT  
GROUNDING PLATE

NOT TO SCALE



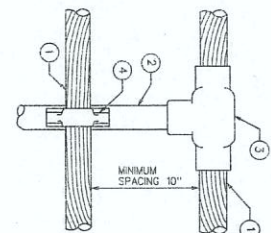
- NOTES:
1. SILICONE CAULK ALL CERAMIC STANDOFF THREADS HAND TIGHTEN ONLY.
  2. HOLE SIZES MAY BE MODIFIED AS NECESSARY.

WALL MOUNT  
GROUNDING PLATE  
NOT TO SCALE



WALL BRACKET  
TYPICAL OF FOUR

MATERIAL LIST 2/E009	
ITEM	DESCRIPTION
1 AS RCD	4/0 AWC BARE, 10-STRANDED COPPER COND.
2 AS RCD	GROUND ROD 3/4"x 9' COPPER CLAD 10 MIL
3 AS RCD	CABLED TYPE GTC-1850, CHANGE +15
4 AS RCD	CABLED TYPE GTC-1850, CHANGE +150

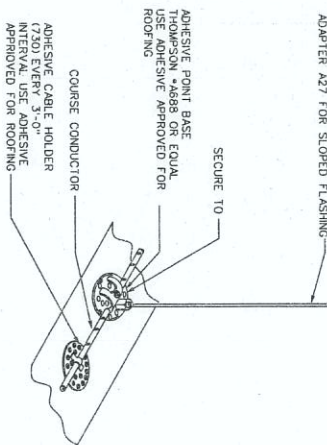


3  
E009

COUNTERPOISE CADWELD

NOT TO SCALE

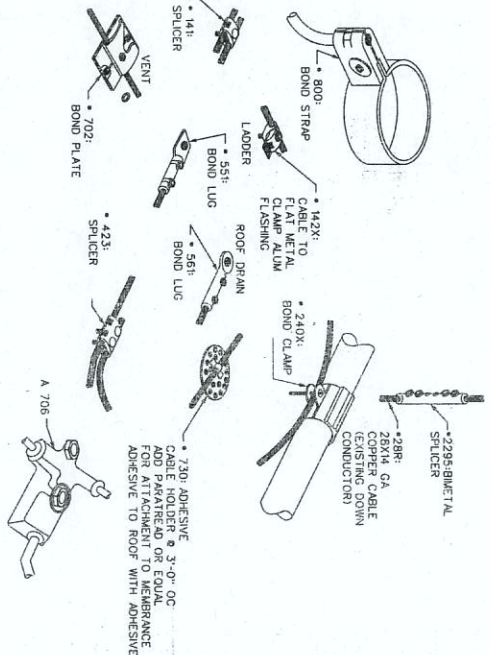
- ## NOTES
1. DO NOT CROSS CONDUCTORS WHEN ROUTING TO GROUND PLATE.
  2. MINIMUM 8" RADIUS ON ALL CONDUCTORS.
  3. TREAT ALL COMPRESSION FITTINGS WITH "NO OX" BEFORE ASSEMBLY.
  4. CUT ALL CONDUCTORS TO APPROPRIATE LENGTHS.
  5. ALL ITEMS/WORK SHOWN ON THIS DRAWING ARE NEW.



5  
E009

AIR TERMINAL/HOLDER  
TO ROOF INSTALLATION

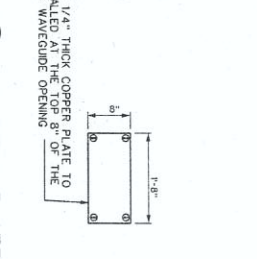
NOT TO SCALE








4 BONDING AND INSTALLATION HARDWARE  
E009 NOT TO SCALE

[illegible]





1. ALL CONNECTIONS TO THE CONCRETE SYSTEM SHALL BE MADE BY MEANS OF ANCHORING BOLTS. ANCHORS SHALL BE STAYED.
2. ALL TIE-BARS SHOW ARE NEW UNLESS OTHERWISE NOTED.
3. SEE ONE-DRAWING FOR ADDITIONAL NOTES AND LEGEND.
4. REMOVE ALL CONCRETE TO THE NEAREST POINT ON THE CONCRETE/STEEL SYSTEM.
5. CONCRETE/STEEL SHALL BE INSTALLED AT DISTANCE OF 2' (MIN) TO 6' (MAX) AWAY FROM THE BUILDING OR TOWER FOUNDATION.
6. ORANGE-RED RODS SHALL BE SPACED APPROX. 20 FT.
7. THE #40, 1" STAINLESS STEEL CONDUCTOR SHALL BE BURIED A MINIMUM OF 6" FEET IN THE GROUND.
8. EACH RIGID CATALYZED STEEL CONDUIT EXITING THE GROUND SHALL BE PROTECTED BY AN ANCHORING AND ORANGE-RED RODS AND A 2" DIA. CONDUCTOR SHALL CROSS THE OVER TO THE CONCRETE/STEEL SYSTEM.

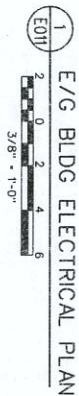
REVISED		DATE		BY	
ADDED		JCH		RUEHL	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION EASTERN SERVICE AREA ATO - TECHNICAL OPERATIONS					
ASR REPLACE ASR BUILDING GROUNDING PLAN					
ST THOMAS					
DESIGNED BY		PROJECT ENGINEER		APPROVED BY	
					
DRAWN		CHECKED BY		DATE	
				02-28-2000	
SCALE		SHEET NO.		SHEET TOTAL	
1/8" = 1'-0"		1 OF 1		1 OF 1	
PROJECT NO.		SHEET NO.		SHEET TOTAL	
SIT-D-1000178-E007		1 OF 1		1 OF 1	

NOTE: EQUIPMENT IDENTIFIED IN THIS PANEL SCHEDULE IS FOR INFORMATION ONLY. EQUIPMENT WILL BE FURNISHED, INSTALLED AND CONNECTED BY OTHERS.

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PANEL SCHEDULE

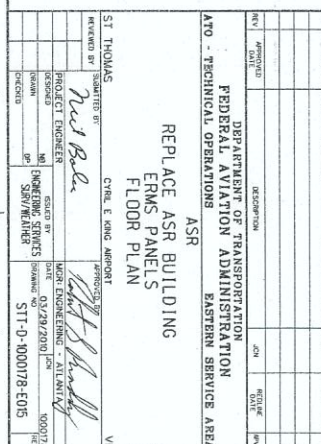
- ## NOTES

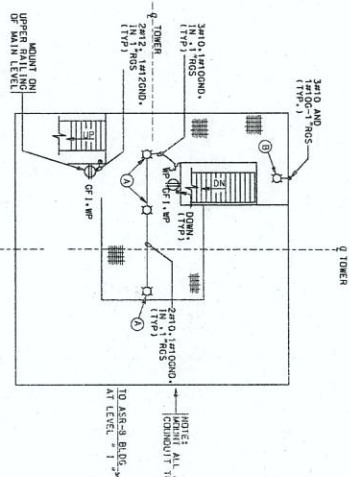
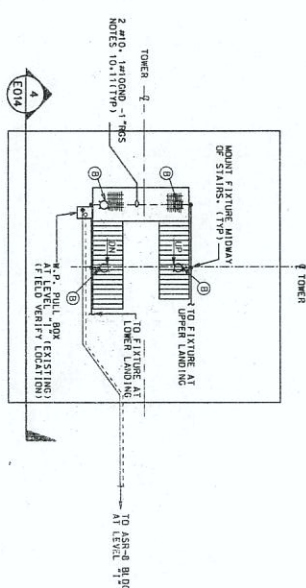
LEGEND

ISSUED FOR CONSTRUCTION





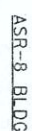




1. SUBGROUNDS SHALL BE COMPLETE, ALL WORK IN ACCORDANCE WITH THE CITY OF CHICAGO SPECIFICATIONS FOR SUBGROUNDS AND CONFORMANCE WITH ILL. STANDARDS PLAC-6-1217E AND PLAC-2019-19C.
2. REMOVE ALL EXISTING STAIRWELL LANDING LIGHTS + RECEPTACLES, SWITCHES AND ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANEL.
3. PROVIDE NEW STAIRWELL LANDING LIGHTS AS LOCATED. OPT. CIRCUIT RECEPTACLES
4. ROUTE NEW WIRING TO TOWER BUILDING PANEL. INSTALL NEW CONDUIT AND WIRING FROM ASR BUILDING TO THE TOWER FOLLOW SAME PATH OF EXISTING CONDUIT FROM BUILDING
5. PROVIDE ALL NEW CONDUIT TO EXISTING GROUND PLATE AT BASE OF TOWER WITHIN 48" AND BARE COPPER WIRE
6. USE 30A CIRCUIT BREAKER FOR NEW LIGHTS AND RECEPTACLES, AND PROVIDE SEPARATE 120V, 20A CIRCUIT BREAKER FOR DISTRICTION LIGHTS, IN SOURCE PANEL. ETPA INSIDE ASR BLDG EQUIPMENT ROOM (FIELD VERIFY EXACT LOCATION).
7. ALL NEW WIRING SHALL BE 600V, #10 AND IN 1" RGS. UND.
8. PROVIDE ALL NEW WIRING IN RIGID GALVANIZED STEEL CONDUIT (EPC COATED), SHOW NEW, NEW UNLESS NOTED OTHERWISE.
9. EXISTING ELECTRICAL EQUIPMENT IS NOT SHOWN FOR CLARITY. ALL ITEMS SHOWN ARE NEW UNLESS NOTED OTHERWISE.
10. ALL CONDUITS SHALL BE SECURED TO TOWER IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. USE 1/2" O.D. STAINLESS STEEL CHANNELS 1"X4" ALL GENERAL SHALL BE CONSIDERED IN THE POSITIVE SENSES UNLESS NOTED TO CAUSE OBSTRUCTIONS AND/OR TRIP HAZARDS
11. SUBCONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE (I.E. CONDUIT, BOLTS, CLAMPS, ETC) FOR COMPLETE INSTALLATION OF THE NEW LIGHTING AND RECEPTACLES, ALL HARDWARE SHALL BE STAINLESS STEEL.
12. OBSTRUCTION LIGHT TO REMAIN IN PLACE. PROVIDE NEW RECEPTACLES AND CONDUIT FOR OBSTRUCTION LIGHT TO REMAIN IN PLACE. PROVIDE NEW WIRING AND CONDUIT BACK TO SOURCE PANEL IN 3/4" RGS. CONDUIT FROM J-BOX TO THE ASR BUILDING PANEL.
13. ALL SP LIGTS SHALL BE CONTAINED INSIDE NEW 3R JUNCTION BOXES NOT SMALLER THAN 4" X 4" X 4" AS REQUIRED.

LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	LAMP/VOLTS	CATALOG NO.	NOTES
(A)	APARTMENT UTILITY FIXTURE WITH RUGGED ALUMINUM HOUSING, CORD	FLUOR/ 1-42W	LITHONIA-VG421M8 OR EQUIVALENT	MFG 7'-0" MAX 16"- MOUNTED
(B)	WAPRENT UTILITY FIXTURE WITH RUGGED ALUMINUM HOUSING, WHITE GLASS, 8" POWER AND CORD, 8" CONDUIT, 1" MOUNTED FOR	FLUOR/ 1-42W	LITHONIA-VW421M8 OR EQUIVALENT	MFG 7'-0" MAX 16"- MOUNTED
(C)	DOWN LIGHT LED EXISTING TO REMAIN	N/A	N/A	N/A

REV	APPROVED	DESCRIPTION	DATE	BY	DATE	BY
001	001	001	001	001	001	001
002	002	002	002	002	002	002
003	003	003	003	003	003	003
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**EXIDE 50KVA**  
**UNINTERRUPTIBLE POWER MODULE**



REV	DATE	DESCRIPTION	JOB	DATE	APP
1	10/1/76	REPLACE ASR BUILDING CONTROL DIAGRAM			
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION EASTERN SERVICE AREA ASR REPLACE ASR BUILDING CONTROL DIAGRAM					
ST THOMAS REVIEWED BY: <i>ST THOMAS</i> DRAWN BY: <i>ST THOMAS</i> PROJECT ENGINEER: <i>ST THOMAS</i> CHECKED BY: <i>ST THOMAS</i> DATE: <i>02/29/2001</i> SCALE: <i>1/8" = 1'-0"</i> SHEET NO.: <i>0000173</i> PROJECT NO.: <i>51T-D-1000173-E013</i>					

REPLACE ASR BUILDING  
CONTROL DIAGRAM

CYRIL E KING AIRPORT

VI

ISSUED FOR: CONSTRUCTION

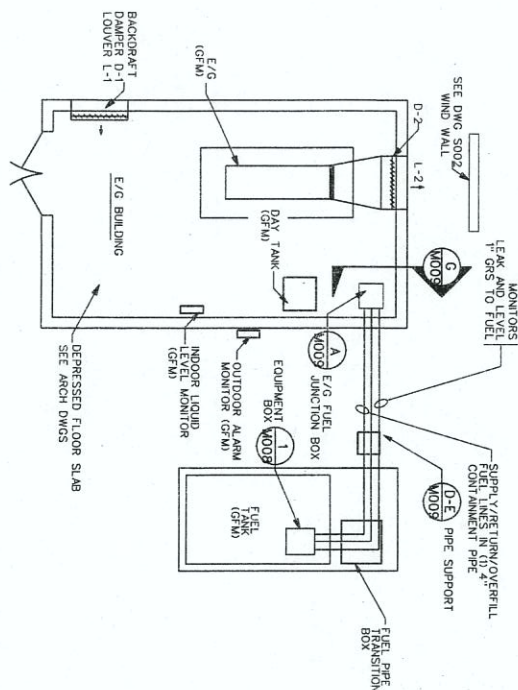


ISSUED FOR CONSTRUCTION

A B C D E F G H

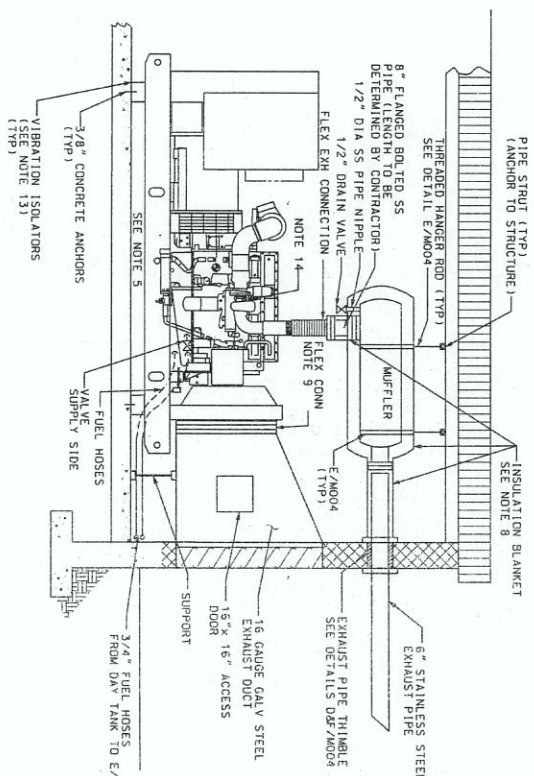
# 1 E/G INSTALLATION PLAN

MO05 NOT TO SCALE



# 2 ELEVATION

MO05 NOT TO SCALE



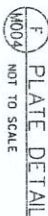
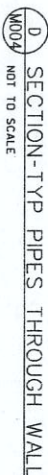
E/G FLUID CAPACITIES					TOTAL
FLUID	ENGINE	RADIATOR	PERIOD		22 QTS
COOLANT	22 QTS	N/A	N/A		22 QTS
	3.8 GAL	7.5 GAL	N/A		11.3 GAL

N/A - NOT APPLICABLE  
GAL - GALLON  
QTS - QUARTS

## NOTES

1. ALL MECHANICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL AND NATIONAL CODES.
2. ALL ITEMS SHOWN ON THIS DRAWING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WITH THE EXCEPTION OF ITEMS LISTED AS (GFM) BY THE GOVERNMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND INSULATION SHALL BE BY THE CONTRACTOR.
3. CONTRACTOR SHALL INSTALL THE GOVERNMENT FURNISHED ENGINE GENERATOR, EXHAUST PIPING, AND FUEL PIPING INCLUDING FITTINGS, GATE VALVES, FLANGES, REDUCERS, WALL STEVES, INSULATION, HANGERS AND PIPE SUPPORTS AS SHOWN OR LOCATED ON THE DRAWING TO PROVIDE A COMPLETE AND OPERABLE ENGINE GENERATOR SYSTEM.
4. CONTRACTOR SHALL INSTALL FUEL DAY TANK (GFM) IN ACCORDANCE WITH THE DRAWING. THE DAY TANK SHALL BE INSULATED WITH INSULATION. FUEL PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPED AS SHOWN ON THE DRAWINGS.
5. CONTRACTOR TO PROVIDE A GALVANIZED OIL DRAIN PAN UNDER ENGINE.
6. CONTRACTOR SHALL FURNISH AND INSTALL 6 INCH 304L STAINLESS STEEL SCHEDULE 40 EXHAUST PIPE AS SHOWN AND SPECIFIED. CONTRACTOR SHALL PROVIDE INSULATION AND HANGERS FOR EXHAUST PIPING TO PROVIDE A COMPLETE EXHAUST SYSTEM. SLOPE HORIZONTAL EXHAUST PIPE TO PROVIDE A COMPLETE EXHAUST SYSTEM.
7. EXHAUST MUFFLER AND PIPING SHALL BE SUPPORTED IN AT LEAST TWO PLACES.
8. INTERIOR EXHAUST PIPING AND MUFFLER SHALL BE INSULATED USING THERMAL BLANKET, ADVANCED THERMO PRODUCTS (GRAY) OR EQUAL.
9. DUCT DYNE (OR EQUAL) METAL TO FABRIC FLEX DUCT CONNECTOR (THERMOFAB 24 GA. 3\"/>
10. CONTRACTOR SHALL PREPARE THE E/G SET FOR START-UP INCLUDING FILLING THE SYSTEMS WITH LUBRICANTS OIL. ANTI-FREEZE AND DIESEL FUEL. ALL SPECIFIED FLUIDS AND LUBRICANTS SHALL BE PROVIDED BY E/G MANUFACTURER. CONTRACTOR UNDER SUPERVISION OF E/G FACTORY REPRESENTATIVE E/G START-UP SHALL BE ACCOMPLISHED BY E/G FACTORY REPRESENTATIVE.
12. EQUIPMENT LAYOUT SHOWN IS DIAGRAMMATIC ONLY. EXACT LOCATION OF MECHANICAL EQUIPMENT SHALL BE FIELD ADJUSTED AS REQUIRED TO ASSURE ADEQUATE SERVICE SPACE FOR ALL EQUIPMENT.
13. THE ENGINE GENERATOR SHALL BE MOUNTED ON NOT LESS THAN SIX (6) VIBRATION ISOLATORS. THE ISOLATORS SHALL BE STEEL SPRING TYPE R350 MODEL 130X7856 MANUFACTURED BY CALIFORNIA DYNAMICS CORPORATION. INSTALLED AS RECOMMENDED BY MANUFACTURER, AND BOLTED TO THE BUILDING FLOOR. CONTRACTOR SHALL BE RESPONSIBLE FOR THE VIBRATION ISOLATORS. THE CONTRACTOR SHALL SHIM BETWEEN THE BEDPLATE AND THE ISOLATORS TO INSURE PROPER SUPPORT. USING MINIMUM 3/8\"/>
14. INSTALL INSULATED MANIFOLD BLANKET FURNISHED WITH ENGINE GENERATOR.

APPROVED BY	DATE	DESCRIPTION	DATE	REVISION
ST THOMAS		REPLACE ASR BUILDING 125 KW ENGINE/GENERATOR INSTALLATION PLANS AND ELEVATION		
DESIGNED BY	DATE	DESCRIPTION	DATE	REVISION
PROJECT ENGINEER		DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION EASTERN SERVICE AREA		
DRAWN		ASR		
SCALE		0.25/0.200		
DATE		03/29/2008		
PROJECT NO.		ST-0-000178-M005		

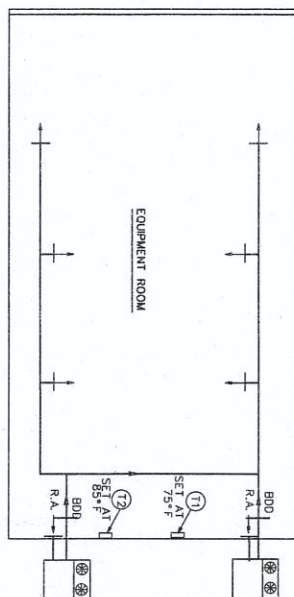


ISSUED FOR: CONSTRUCTION

# 1 SCHEMATIC FLOW DIAGRAM

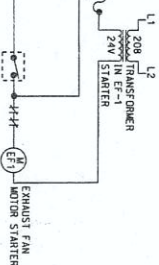
NOT TO SCALE

NOTE: INSTALL THERMOSTAT GUARDS, HONEYWELL T500A, IN EACH ROOM. PROVIDE ENGRAVED IDENTIFICATION PLATES FOR T-1, T-2, ACU-1, AND ACU-2.



# 2 WIRING SCHEMATIC

NOT TO SCALE  
(SHOWN FOR REFERENCE ONLY)



# SEQUENCE OF OPERATION

## A. HVAC SYSTEM:

1. UNDER NORMAL (FULL INTERNAL LOAD) OPERATING CONDITIONS, AIR CONDITIONING UNIT (ACU) IS OPERATING WITH THE SECOND UNIT ON STANDBY. STANDBY UNIT IS ACTIVATED WHEN INDOOR TEMPERATURE RISES TO 85°F. DURING NORMAL INTERNAL LOAD CONDITIONS, STANDBY UNIT IS CONTROLLED BY THERMOSTAT. THERMOSTAT SETTINGS FOR ALL THERMOSTATS SHALL BE PLACED ON A PLASTIC LAMINATED PLATE AND MOUNTED ON WALL ADJACENT TO THERMOSTATS.
2. ENGINE OPERATING WHEN GENERATOR IS STARTED. INTAKE DAMPER D-3 SHALL BE OPEN WHEN EF-1 IS OPERATING.
3. ENGINE NOT OPERATING WHEN INDOOR TEMPERATURE RISES ABOVE 95°F. EXHAUST FAN EF-1 SHALL BE CONTROLLED BY T-5 (SET @ 95°F). EXHAUST FAN EF-1 SHALL BE OPEN WHEN EF-1 IS OPERATING. 75-105° DAMPER D-3 SHALL BE OPEN WHEN EF-1 IS OPERATING.
4. MANUAL OPERATING WHEN H.O.A. SWITCH IS PLACED IN "ON" POSITION. EXHAUST DAMPER D-3 SHALL OPEN AND EF-1 SHALL OPERATE AND RUN CONTINUOUSLY. WHEN H.O.A. SWITCH IS PLACED IN "OFF" POSITION, THERMOSTAT T-5 SHALL CONTROL EXHAUST FAN EF-1. EXHAUST FAN EF-1 SHALL BE OPEN WHEN EF-1 IS OPERATING. 75-105° DAMPER D-3 SHALL OPEN WHEN EF-1 IS OPERATING.

## LEGEND

- ACU - AIR CONDITIONING UNIT
- R1 - CONTROL RELAY
- D-3 - INTAKE DAMPER
- DS - DISCONNECT SWITCH INTERLOCK
- MEF - EXHAUST FAN MOTOR STARTER
- DLS - OVERLOADS
- T - THERMOSTAT
- BDD - BACK DRAFT DAMPER

REV	APPROVED	DESCRIPTION	DATE	BY	DATE
1		DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS ASR REPLACE ASR BUILDING A/C CONTROL WIRING SCHEMATIC			

ST. THOMAS  
CYRIL E KING AIRPORT

DESIGNED BY: [redacted]  
CHECKED BY: [redacted]  
DATE: 03/29/2011  
DRAWN BY: [redacted]  
DATE: 03/29/2011  
PROJECT: STI-D-1000178-M003

## AIR CONDITIONING UNIT SCHEDULE

AIR CONDITIONING UNIT SCHEDULE																												
EQUIPMENT NUMBER	MANUFACTURER	MODEL AND TYPE	LOCATION	DISCHARGE	CAPACITY (BTUH)		INDOOR FAN			OUTDOOR AIR		MOTOR DATA		FILTER DATA		ELECTRICAL DATA					CONTROLS							
					SENSIBLE	TOTAL	TYPE	CFM	EX.T.S.P. IN. H. O2	CFM	DRIVE	MOTOR RPM	B.H.P.	TYPE	NUMBER	SIZE	NOMINAL IN/17	COMPRESSORS		OUTDOOR FAN	INDOOR FAN	HEATERS	UNIT	HEAD PRESSURE	COMPRESSOR			
ACU-1	TRANE	THORAC 3 SINGLE PACKAGE COOLING ONLY	SLAB SIDE RETURN	HORIZONTAL SUPPLY & RETURN	169,000	240,000	CENTRIFUGAL CLASS 1	8,000	0.85		SEE NOTE 5	BELT	1750	5.1	DISPOSABLE FOR RETURN AIR ONLY	SEE NOTE 6	SEE NOTE 6	208V/20/60Hz	2	EA.	247	EA.	2	EA.	7.5	24.2	NONE	COMPLETE PACKAGE FOR LOW AMBITION 5-YEAR WARRANTY

## NOTES:

1. CAPACITY BASED ON 95°F F.D.B. ENTERING CONDENSER 80°F E.O.B. -67°F E.W.B. ENTERING EVAPORATOR.
2. PROVIDED EACH UNIT WITH ANTI-SHORT CYCLE TIMES FOR EACH COMPRESSOR, TIME DELAY RELAYS, COMPRESSOR UNLOADERS, AND CONDENSER COIL GUARDS.
3. ALL TIME DELAY RELAYS SHALL BE ADJUSTABLE TYPE 10 TO 15 MINUTES.
4. UNITS SHALL BE WIRED AT FACTORY SO THAT WHEN THERMOSTAT SET POINT IS SATISFIED, ALL COMPRESSORS SHALL IMMEDIATELY DE-ENERGIZE.
5. PROVIDE WITH FACTORY APPLIED POLYURETHANE INSULATION AND POLYURETHANE COATING TO ALL COILS AND MOIST COATING TO ALL COMPONENTS OF THE UNIT INCLUDING CONDENSER AND EVAPORATOR COILS.
6. DO NOT INSTALL OUTSIDE AIR INTAKE HOODS.
7. PROVIDED 2" THICK PLEATED FILTERS. SEE SPECIFICATIONS FOR EFFICIENCY. FILTERS SHALL BE 20" x 20" x 2" MAXIMUM WITH SIZE, QUANTITY, AND LOCATION AS RECOMMENDED BY MANUFACTURER TO FILTER ALL (100%) RETURN AIR.
8. PROVIDED SPARE MICROPROCESSOR CONTROL CIRCUIT BOARD FOR EACH (2 TOTAL) AIR CONDITIONING UNIT, SPARE CIRCUIT BOARDS

## EXHAUST FAN SCHEDULE

EXHAUST FAN SCHEDULE												
EQUIPMENT NUMBER	MANUFACTURER	MODEL AND TYPE	LOCATION	DISCHARGE	FAN DATA			MOTOR DATA			REMARKS	
					TYPE	CFM	N.S.P. (IN H.O.)	DRIVE	N.M.H.P.	RPM		ELECT.
EF-1	COOK*	16ATD8	INDOOR MOUNTED	HORIZONTAL	PROPELLER	1,350	1/2	DIRECT	1/2	1725	208V 60Hz	WITH MOTOR GUARD MOUNTING PANEL AND WALL SHUTTER

## LOUVER SCHEDULE

EQUIPMENT NUMBER	WALL OPENING	SERVES	BLADE TYPE	BLADE ANGLE	BLADE WIDTH	BLADE AND FRAME MATERIAL	BLADE AND FRAME FINISH	APPROX. HEIGHT VS. FREE AREA	INSECT SCREEN	REMARKS
L-1	48" 72"	EG ROOM AIR INTAKE	J	45°	6"	6063, 125" extruded alum	KYNAR 500	45"	18 GAUGE NO.18 MESH S.S.	DESIGN FOR 45 PSF WINDLOAD
L-2	48" 56"	ENGINE EXHAUST	J	45°	6"	6063, 125" extruded alum	KYNAR 500	45"	18 GAUGE NO.18 MESH S.S.	DESIGN FOR 45 PSF WINDLOAD
L-3	32" 32"	EXHAUST FAN EF-1	J	45°	6"	6063, 125" extruded alum	KYNAR 500	45"	18 GAUGE NO.18 MESH S.S.	DESIGN FOR 45 PSF WINDLOAD

## DAMPER SCHEDULE

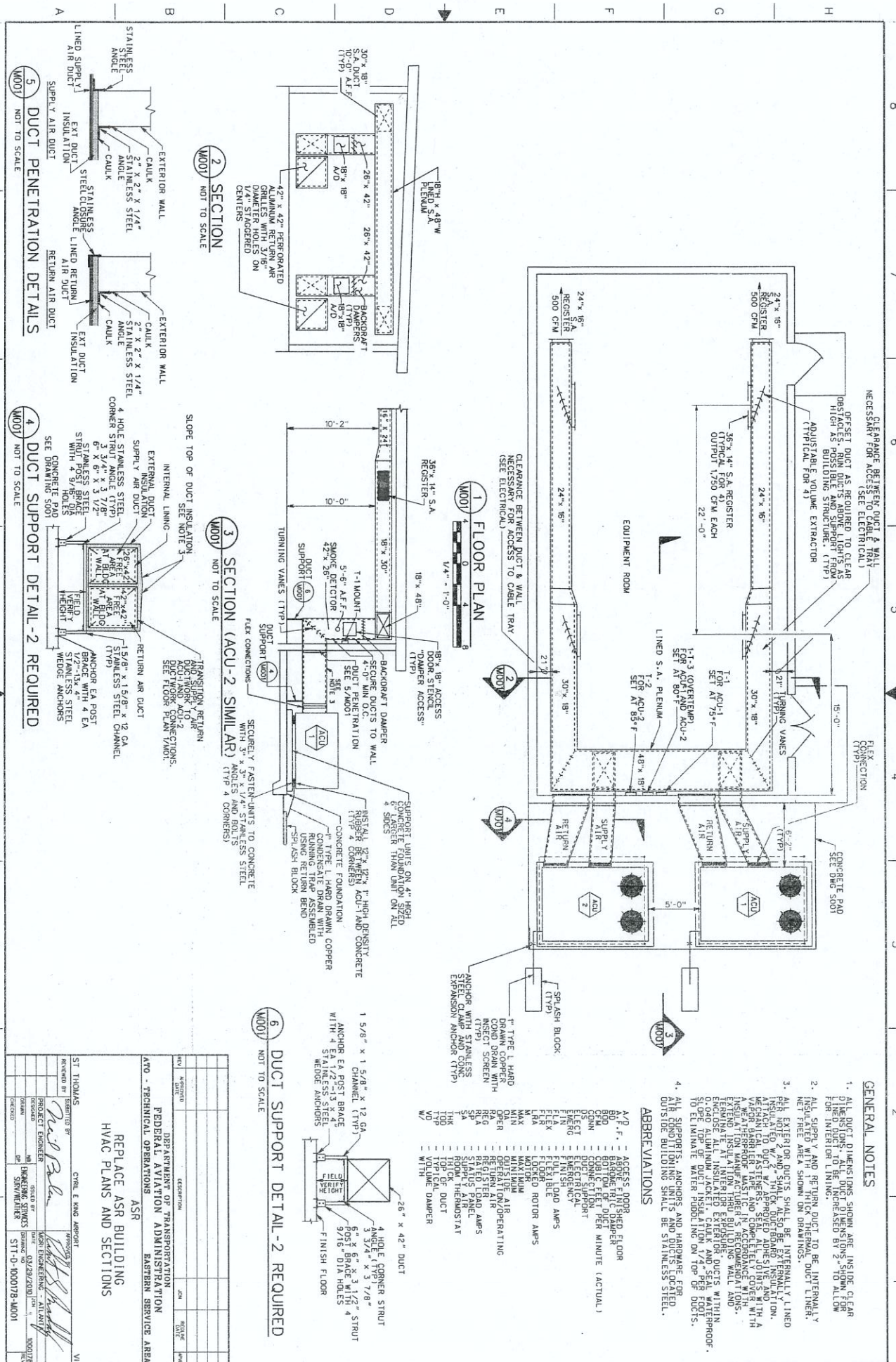
EQUIPMENT NUMBER	WALL OPENING	SERVES	TYPE	BLADE MATERIAL	FRAME MATERIAL
D-1	48" 72"	AR INTAKE	COUNTERBALANCE	6063-T5, 070" extruded alum	6063-T5 4"x1"
D-2	48" 56"	ENGINE EXHAUST	COUNTERBALANCE	6063-T5, 070" extruded alum	6063-T5 4"x1"
D-3	32" 32"	EXHAUST FAN EF-1	COUNTERBALANCE	6063-T5, 070" extruded alum	6063-T5 4"x1"

REV	DATE	DESCRIPTION	BY	DATE	REVISION

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
EASTERN SERVICE AREA

ASR  
REPLACE ASR BUILDING  
MECHANICAL SCHEDULES

ST THOMAS	DESIGNED BY	CYRIL E. KING ARCHITECT	DATE	10/02/09
PROJECT ENGINEER	DESIGNED BY	ARCH ENGINEERING - ATLANTA	DATE	10/02/09
MECHANICAL SERVICES	DESIGNED BY	ARCH ENGINEERING - ATLANTA	DATE	10/02/09
SUPV/ENGINEER	DESIGNED BY	ARCH ENGINEERING - ATLANTA	DATE	10/02/09



ARCHITECTURAL & STRUCTURAL

[illegible]

## CIVIL

[illegible]

## ELECTRICAL SYMBOLS

F	- FIRE ALARM PULL STATION
M	- FIRE ALARM AUDIBLE/VISION APPLIANCE
S	- FIRE ALARM SMOKE DETECTOR
W	- FIRE ALARM HEAT DETECTOR
△	- EXOTHERMIC WELD
△	- COPPER CLAD GROUND ROD, 3/4"x10"
△	- COPPER CLAD GROUND ROD IN IN FIBERGLASS POLE VESTER BOX
▽	- DUREX RECTICAL, 20A, 125V
⊕	- 1/2" DIA. GROUND ROD, 10' LONG, 1/2" DIA. CONDUCTIVE W/WEATHERPROOF, OF 1-GROUND FAULT INTERPRETING TYPE
⊕	- CIRCUIT BREAKER WITH ELECTROMAGNETIC OVERCURL DEVICE
⊕	- BRACKET FIXTURE (LETTER INDICATES TYPE)
⊕	- FLUORESCENT FIXTURE, ① INDICATES TYPE, X INDICATES CIRCUIT, X INDICATES SWITCH CONTROL
⊕	- GROUND ROD CONNECTION
⊕	- SAFETY DISCONNECT SWITCH
⊕	- TELEPHONE DUTLET
⊕	- JUNCTION BOX
⊕	- DOOR CONTACTS
⊕	- RECEPTACLE, 250V, NEMA 6-20R
⊕	- CONNECTION TO RE-BAR IN FOUNDATION
⊕	- MOTOR, X INDICATES HOSEPOWER
⊕	- HEAT DETECTOR NO.1
⊕	- SMOKE DETECTOR NO.1
⊕	- DOOR SWITCH
⊕	- EING PANEL P3
⊕	- EING UPS
⊕	- END-OF LINE RELAY
⊕	- BRANCH CIRCUIT HOLE/IN TO PANEL BOARD
⊕	- 1/2" DIA. GROUND ROD, 10' LONG, 1/2" DIA. CONDUCTIVE W/WEATHERPROOF, OF 1-GROUND FAULT INTERPRETING TYPE
⊕	- BRANCH CIRCUIT PANEL BOARD
⊕	- 200MVA/200, 3PH, 4W, 60HZ
⊕	- 200MVA/200, 3PH, 4W, 60HZ
⊕	- FLUSH MOUNTED UNLESS NOT OTHERWISE NOTED
⊕	- 1-WAY SWITCH, 48" AFF FLUSH MOUNTED
⊕	- 6" INDICATES FIXTURE CONTROL
⊕	- SINGLE POLE SWITCH 48" AFF FLUSH MOUNTED
⊕	- COMBINATION STARTER
⊕	- AC WOTING, WP AS NOTED
⊕	- MAIN GROUNDING PLATE
⊕	- MULTIPONT GROUND PLATE
⊕	- EXIT LIGHT FIXTURE
⊕	- EMERGENCY LIGHTING SET

## ABBREVIATIONS

1	AFF	AMFERS
2	ABOVE FINISHED FLOOR	
3	BSC	BARE STRANDED DOWN CONDUCTOR
4	BKFR	BREAKER - X IS BREAKER NUMBER
5	C	CANAL
6	CU	COPPER
7	DP	POWER DISTRIBUTION PANEL
8	EQ	EQUIPMENT
9	EXT	ELECTRICAL METAL TUBING
10	E3D	ELECTRO-STATIC DISSIPATIVE
11	FLA	FALL LOAD ARMS
12	FL	FLUORESCENT
13	GRG/GRD/GRD	GALVANIZED RIGID STEEL CONDUIT
14	LD	TYPE L ELDON
15	M/W	MATCHING
16	MP	MAINTENANCE BYPASS PANEL
17	MEN	THRESDAD CIRCUIT MILS
18	MOS	MANUAL DISCONNECT SWITCH
19	MP	MULTI-POINT GROUND
20	MP	MULTI-POINT GROUND
21	MID	MIDWED
22	MS	MANUAL TRANSFER SWITCH
23	NIC	NATIONAL ELECTRIC CODE
24	PS	NOT IN CONTACT
25	PHOTO	POWER FACTOR
26	PAL	PHOTO ELECTRIC CONTROL & SWITCH
27	RCH	PANEL
28	RLA	RECEPAC
29	RMA	NATED LOAD ARMS
30	RMS	REOTE MAINTENANCE MONITORING
31	SW	REOTE MAINTENANCE MONITORING SYSTEM
32	TS	SWITCH
33	TPSS	TRANSFERRER, APPROVED-ACROSS START SWITCH (RLA)
34	TR	TRANSFERRED TO THE SOURCE SUPPRESSOR
35	XTBR	UNTRANSFERRED POWER SUPPLY
36		TRANSFORMER

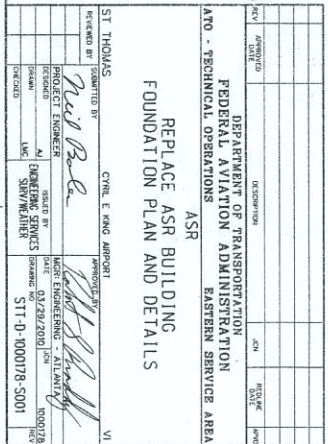
RECEIVED BY  
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ST THOMAS  
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CHECKED

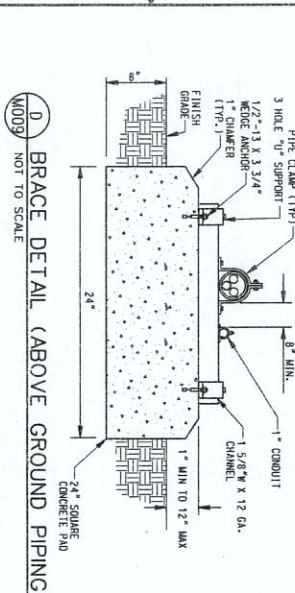
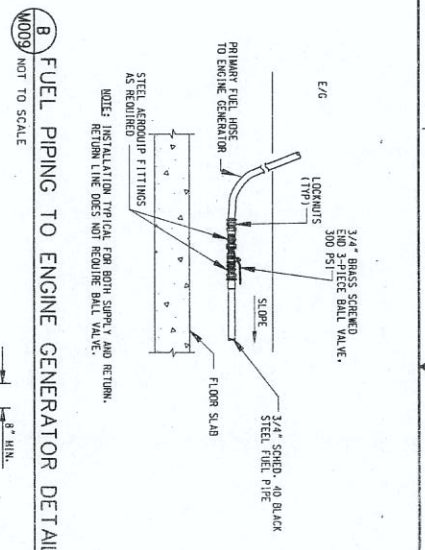
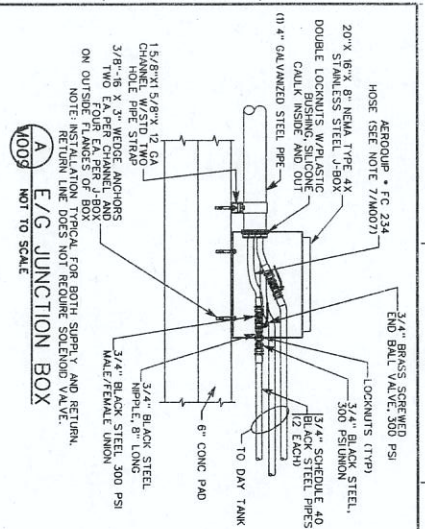
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## MECHANICAL

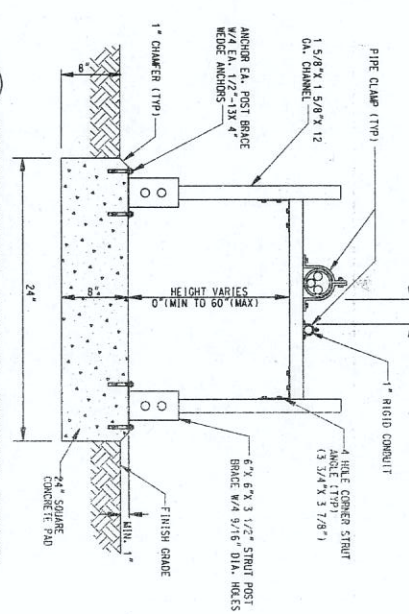
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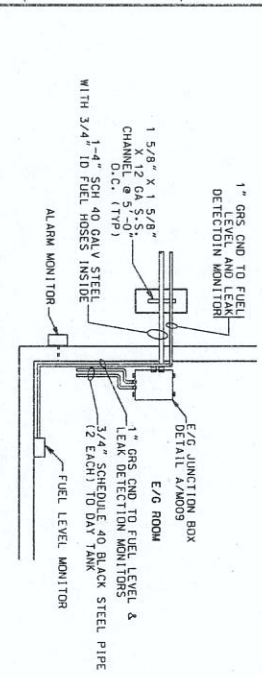
ISSUED FOR CONSTRUCTION



**D BRACE DETAIL (ABOVE GROUND PIPING)**  
 M009 NOT TO SCALE

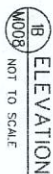
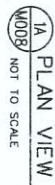


**E BRACE DETAIL (ABOVE GROUND PIPING)**  
 M009 NOT TO SCALE

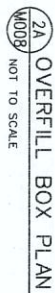


**G ENGINE GENERATOR JUNCTION BOX LAYOUT**  
 M009 NOT TO SCALE

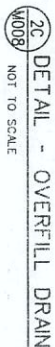
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PROJECT ENGINEER		[Signature]	
DESIGNED BY		[Signature]	
CHECKED BY		[Signature]	
DATE		DATE	
03/23/2011		03/23/2011	
PROJECT NO.		PROJECT NO.	
STI-D-000078-M009		STI-D-000078-M009	



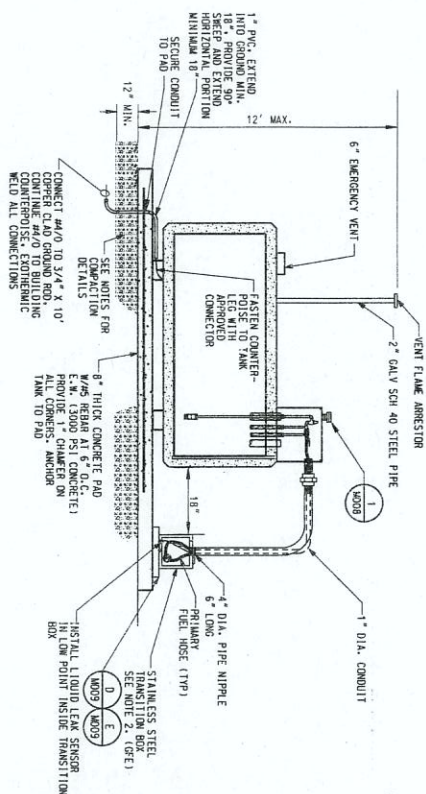
1 EQUIPMENT BOX DETAILS  
M008 NOT TO SCALE



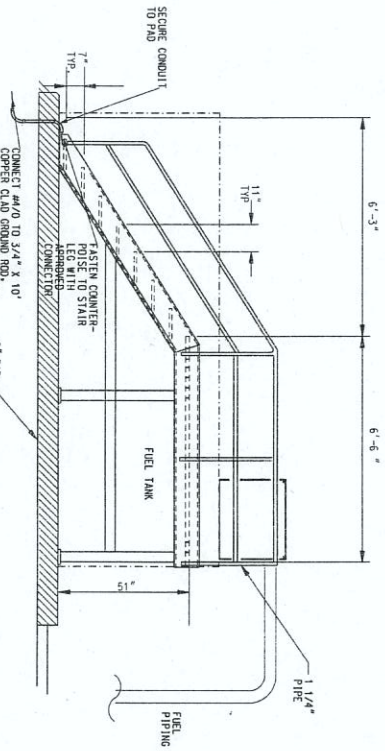
2 OVERFILL BOX DETAILS  
M008 NOT TO SCALE



ISSUED FOR CONSTRUCTION



1 TANK SIDE ELEVATION  
MO07 NOT TO SCALE



2 ACCESS STAIRS ASSEMBLY  
M007 NOT TO SCALE

## NOTES

1. ALL DETAILS SHOWN ARE DISCREPANCY - SEE SITE PLAN CODE FOR TANK ORIENTATION, AND MECHANICAL DRAWINGS FOR TANK LAYOUT AND FLOOR PLANS TO DETERMINE LOCATION, DESIGN VARIATIONS AND BE REFINED WITH OTHER FIELD REPRESENTATIVE APPROVAL.
2. 18"x18" H-1 SECONDARY CONTAINMENT JUNCTION BOX, 16 GAUGE STAINLESS STEEL - (DET.)
3. THE CONTRACTOR SHALL ASSEMBLE GOVERNMENT-FURNISHED EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND CONTRACTOR SHALL PROVIDE ALL ADDITIONAL MATERIALS SPECIFICATION, TOOLING, EQUIPMENT AND ACCESSORIES BASED ON PRODUCT PRODUCTS.
4. THE OUTDOOR OPERATOR MONITOR ALARM SHALL BE LOCATED WITHIN ONE (1) FEET OF THE TANK AND BE VISIBLE TO THE FUEL TRUCK OPERATOR. INSTALL ONE (1) INCH CONDUIT FROM THE OUTDOOR MONITOR ALARM TO THE LEAK AND LEVEL MONITOR MOUNTED INSIDE THE E/O ROOM. INSTALL MONITOR ALARM PER MANUFACTURER'S INSTRUCTIONS.
5. ALL BORED METAL FRAMING SYSTEMS SHALL BE MADE OF GALVANNEED STEEL. ASSUMED SHOWN PER DETAIL 07-10. THE MANHOLE SHALL BE STAINLESS STEEL. CHANNEL SHALL BE STAINLESS STEEL (15.5") CONFIGURING TO AIST TYPE 304 OR THE 316.
6. INSTALLATION OF PIPING SHALL BE IN ACCORDANCE WITH THE TANK MANUFACTURER'S CURRENT INSTALLATION INSTRUCTIONS, AND NEPA 301.37 AND 301.40, PERFORM ALL WORK IN ACCORDANCE WITH THE FEDERAL REGULATORY REQUIREMENTS FOR TANKS, TANKS, TIME OF CONSTRUCTION, AND ANY REGULATIONS OF GOVERNMENTAL AUTHORITIES HAVING JURISDICTION. REFLECT ANY CODE VIOLATIONS DISCOVERED IN CONTRACT DOCUMENTS MAKE ANY CORRECTIONS OR ADDITIONS NECESSARY FOR COMPLIANCE WITH APPLICABLE CODES AT AN ADDITIONAL COST TO OWNER. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES.
7. PRIMARY PIPING FROM THE FUEL TANK TO E/O SHELTER AND THE FUEL FROM THE TRANSITION OF STORAGE OF FUEL TO THE E/O SHELTER SHALL BE CONDUCTED THROUGH FIRE RESISTANT INSULATION & AIR ELASTOMER COVER, AND SHALL MEET THE FIRE RESISTANT REQUIREMENTS FOR U.S. COAST GUARD COMMERCE AND MARITIME SERVICE DIVISION (U.S. COAST GUARD) P.I.T.T.S., OR APPROVED EQUIP. Primary piping inside E/O shelter shall be schedule 40 BLACK STEEL - FINAL FUEL FILL CONNECTION TO FUEL GENERATOR) CAN BE SCHEDULE 40 BLACK STEEL - FINAL FUEL FILL CONNECTION TO FUEL GENERATOR) CAN BE SCHEDULE 40 BLACK STEEL - FINAL FUEL FILL CONNECTION TO FUEL GENERATOR)
8. MAIN TANK SUPPLY LINE SHALL HAVE AN IN-LIE FUEL STRAINER ON THE INTERIOR SIDE OF THE TANK. THE CONTRACTOR SHALL PROVIDE THE STRAINER WITH A REMOVABLE FILTER ELEMENTS WITH KOBER TO DETERMINE THE SIZE AND SPECIFICATIONS REQUIRED TO MEET MANUFACTURER RECOMMENDATIONS AND NEPA'S REQUIREMENTS, INCLUDING A HIGH-CAPACITY FILTER. THE CONTRACTOR SHALL PROVIDE THE STRAINER WITH A REMOVABLE FILTER ELEMENTS WITH KOBER TO DETERMINE THE SIZE AND SPECIFICATIONS REQUIRED TO MEET MANUFACTURER MAIN TANK SUPPLY SHALL HAVE A SCHEDULE VALVE INTERFERED WITH THE ENGINE GENERATOR SUPPLY PUMP TO PREVENT SHIPPING. VALVES SHALL BE INSTALLED ON THE RETURN PIPING.
9. ALL FUEL SHUT-OFF VALVES SHALL BE 3/4" x 1" PORTICE BRONZE BODY, threaded BALL VALVE, END PSI, HAMMOND MODEL 8604 OR EQUAL.
10. PROVIDE FLEXIBLE LINE PIPING CONNECTIONS TO PUMPS AND TO THE E/O. POST A FUEL PIPE DIAGRAM WITH FUEL SHUTTER INSTRUCTIONS IN THE E/O ROOM PER NEPA 31.10-2.2.
11. ALL ABOVE GRADE SECONDARY CONTAINMENT PER FUEL LINES SHALL BE 4-INCH OR DIPTED GALVANIZED SCHEDULE 40 STEEL PIPE AND FITTINGS, ALL THEREAFTER CONNECTIONS SHALL BE NATIONAL PIPE, JUNE 1991). ALL ABOVE GRADE SECONDARY CONTAINMENT FUEL LINES SHALL BE 4-INCH OR DIPTED GALVANIZED SCHEDULE 40 STEEL PIPE AND FITTINGS, ALL THEREAFTER CONNECTIONS SHALL BE NATIONAL PIPE, JUNE 1991).
12. ALL PIPE AND JOINTS SHALL BE SEALED LIQUID TIGHT WITH A PREMIUM QUALITY, VISCOUS, NON-HAZARDOUS, SMOOTH PASTE WITH TERDON THAT IS INSULATE IN FUEL FORMISH OSOLDA SOFT SET WITH TERDON, OR APPROVED EQUIP.
13. PRIMARY AND SECONDARY PIPING CONNECTIONS SHALL BE TESTED WITH AN AUTOMATIC PRESSURE TEST SYSTEM FOR A MINIMUM OF 2 HOURS. ISOLATE PIPING PERMANENTLY FROM THE SYSTEM.
14. FILL THE TANK AND DO EXHAUST CAPABILITY WITH NEW #2 DIESEL FUEL OF NOT LESS THAN 40 CENTS PER GALLON.

NOTES (CONT'D)

15. DO NOT INSTALL TANK WITHIN 10 FEET OF ANY BUILDING.
16. CONTRACTOR SHALL INSTALL ONE 24-MCH ELECTRICAL CONDUIT TO PROVIDE 120V POWER TO THE LEAK AND LEVEL MONITOR PANEL. COORDINATE WITH THE NEAREST EXISTING FURNACE PIPER PANEL LOCATION AND BREAKER. TYPICAL COORDINATION IS AS DESCRIBED ON SHEET 7.
17. CONTRACTOR SHALL PROVIDE ALL NECESSARY POWER AND LEAK SENSING CONNECTIONS. CONDUITS, FLEXIBLE JOINTS, BOWES AND FLEXIBLE RIGID CONNECTIONS FOR LEAK AND LEVEL SHALL BE IN ACCORDANCE WITH AMERICAN IRON STEEL CODE, NFPA AND I.E.C. ALL BURIED CABLES AND FITTINGS SHALL BE PVC COVERED RIGID STEEL CONDUIT. ALL ENVRSED CONDUIT AND FITTING SHALL BE GALVANIZED RIGID STEEL CONDUIT. ALL CONDUIT JOINTS SHALL BE FLUOID TIGHT.
18. THE FIELD ALARM SYSTEM SHALL MONITOR THE SENSORS STRAIGHT FROM THE OPI CONTACTS PROVIDED BY THE MANUFACTURERS AND LOCATED AT THE FIELD ALARM MONITOR. THE FIELD ALARM SYSTEM SHALL MONITOR THE MAIN TANK FILL LEVEL AND ANY ASSOCIATED ALARMS. THE MONITOR SHALL BE INSTALLED OUTSIDE THE TANK AREA. THE FIELD ALARM SHALL HAVE A 120VAC SUPPLY WITH A MINIMUM AMPERE'S REPRESENTATIVE OF THE 24-1458R, XZ39 (Battery Monitor).
19. VERIFY LOCATION OF ALL UTILITIES, BRIGATION AND COMMERCE PRIOR TO EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF ALL UTILITIES, BRIGATION AND COMMERCE SYSTEMS.
20. CLEAN PAVING SURFACES IMMEDIATELY AFTER PUMP OR CONNECTION.
21. REMOVAL OF ASPHALT FROM PAVEMENT, ALL EXPOSED CONDUIT, CHANNEL, EXOS AND PIPE TERMINALS WITH AN APPROVED COLIC GALVANIZED COATING.
22. PRIOR TO ENGINE START-UP, PRIME TIE LINE FROM TANK TO E/G.
23. ENSURE PAVING SHALL NOT BE INSULATED UNTIL AFTER E/G START-UP TO INSURE NO CRACKS TEAMS.

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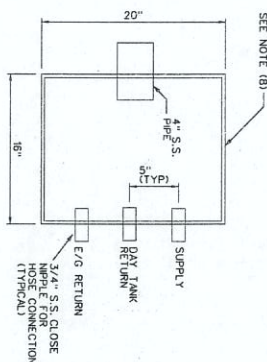
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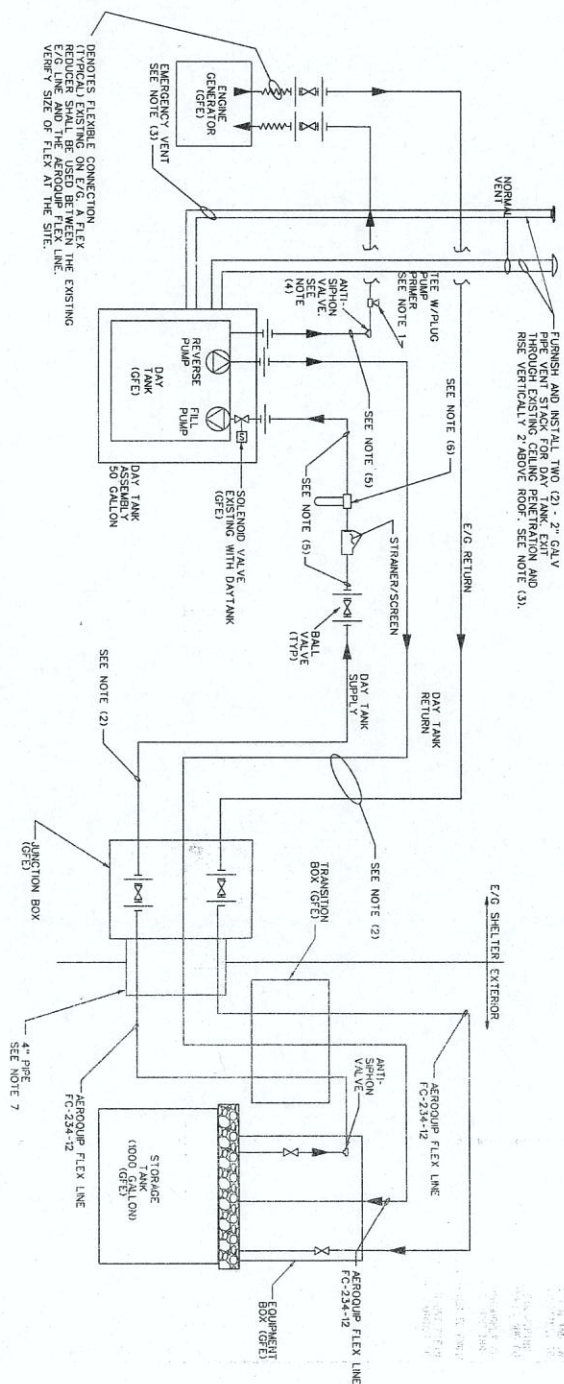
## 2 FUEL OIL JUNCTION BOX

NOT TO SCALE



## 1 FUEL OIL PIPING SCHEMATIC

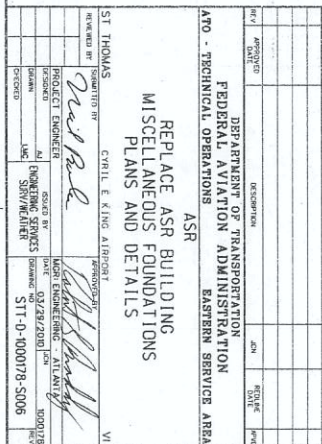
NOT TO SCALE



### NOTES

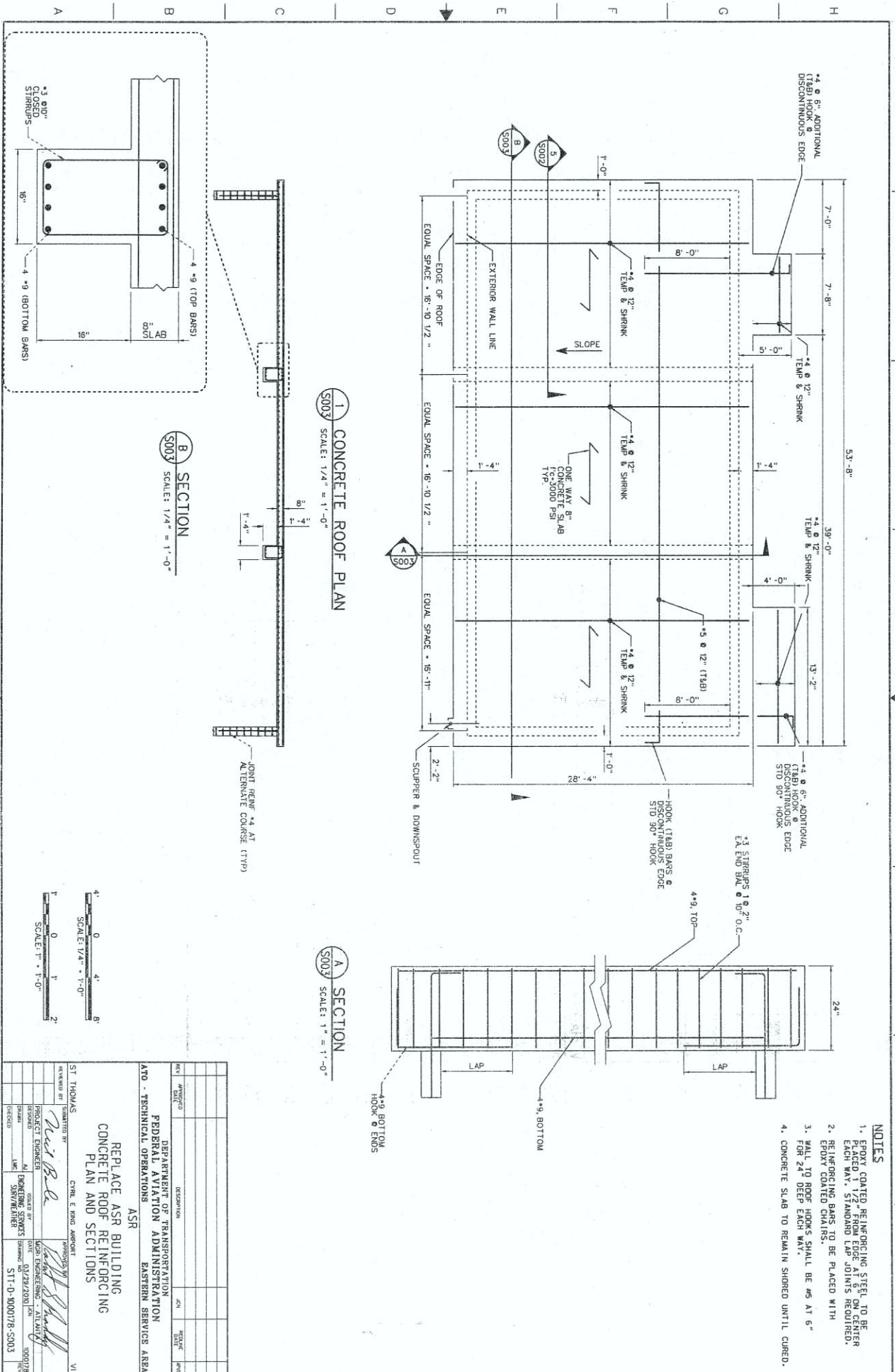
- (1) FROM JOE TEE FITTING WITH PLUG IN SUPPLY LINE AT HIGHEST POINT
- (2) ALL RETURN LINES SHALL BE A MINIMUM OF FC-234-12. IF FLEX IS USED, THE SUPPLY LINE SHALL BE A MINIMUM OF 1/2 INCH ID. IF FC-15 IS USED, AND AEROGROUP FC-234-10 IS USED, THE RETURN LINE SHALL BE A MINIMUM OF 1/2 INCH ID. BETWEEN THE DAY TANK AND THE E/G.
- (3) EARTHSHAKE AND INSTALL ONE (1) 2" ATMOSPHERIC, MUSHROOM-TYPE VENT CAP WITH SCREEN (UNIVERSAL # 41 OR EQUIV.) TO PREVENT PRESSURE RELEASE DEVICE. THE OPENING PRESSURE SHALL BE 0.5 PSIG. THE SCREEN SHALL BE INSTALLED AT THE HIGHEST POINT OF THE FUEL LINE. (N/C)
- (4) THE ANTI-SIPHON VALVE MUST BE PRESET TO THE ELEVATION OF THE HIGHEST POINT OF THE FUEL LINE. (N/C)
- (5) THE CONTRACTOR MAY USE SCHEDULE 40 BLACK CS FOR MOUNTING VALVES, STRAINER, ANTI-SIPHON, PLUG, AND FILTER. USE 1/2" SCHEDULE 40 PIPE FOR THE SUPPLY LINE AND USE 3/4" OR THE RETURN AS NEEDED.
- (6) THE FILTER SHALL BE A RACOR 4120 FUEL TO MICRON (P/P/PHASE WITH BOWL REMOVAL TOOL - P/N 26681).
- (7) PROVIDE 4" PIPE AND SLEEVE WITH CAP FOR CONTINUATION BY OTHERS.
- (8) STAINLESS STEEL 304 x 1/2" x 8' FUEL JUNCTION BOX WITH 4" STAINLESS STEEL PIPE TO EXTEND 4" BEYOND SHELTER EXTERIOR WALL WITH THREADED CAP.

ST THOMAS		CYRIL E KING AIRPORT	
REVISION	DATE	BY	APPROVED
1	03/17/2011	hmk	VI
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION EASTERN SERVICE AREA ASR REPLACE ASR BUILDING FUEL OIL PIPING SCHEMATIC			
PROJECT ENGINEER	DESIGNED BY	CHECKED BY	IN CHARGE
hmk	hmk	hmk	hmk
DATE	DATE	DATE	DATE
03/17/2011	03/17/2011	03/17/2011	03/17/2011
SCALE	SCALE	SCALE	SCALE
1"=10'	1"=10'	1"=10'	1"=10'
STT-D-100078-4006			









REVIEWED BY	DATE	DESCRIPTION	APPROVED BY	DATE	DESCRIPTION
ST THOMAS					
DESIGNED BY	DATE	DESCRIPTION	APPROVED BY	DATE	DESCRIPTION
PROJECT ENGINEER					
ENGINEERING STAFF					
DATE	03/29/2011	CONCRETE ROOF REINFORCING PLAN AND SECTIONS			
PROJECT NO.	ST-0-1000178-S003				
ISSUED FOR CONSTRUCTION					

